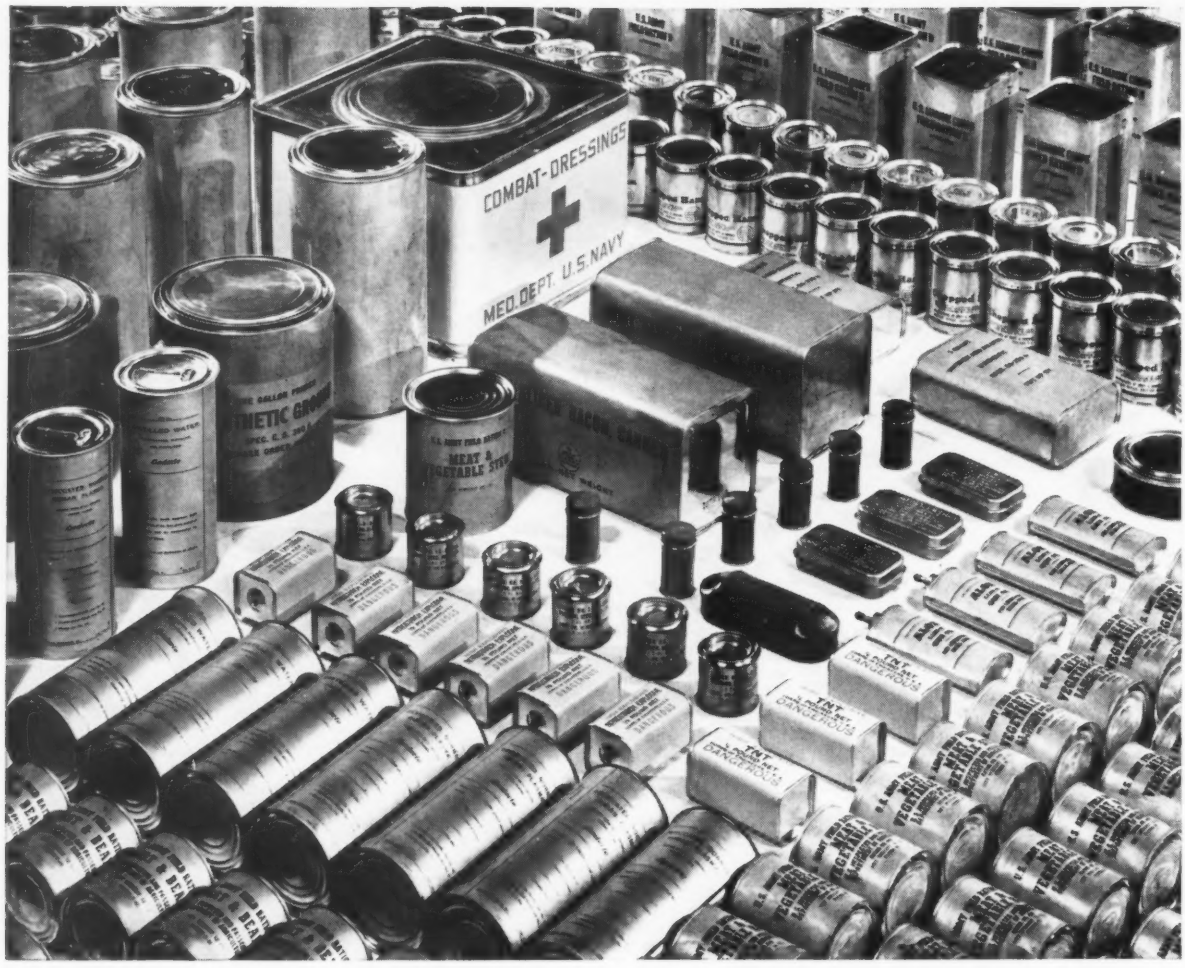
MODERN PACKAGING

JANUARY · 1942



SOME "NON-SECRET" WEAPONS THE AXIS WOULD LIKE TO HAVE

Study the Labels on the cans and packages in the picture above.

On some of them, you'll notice "Army Sliced Bacon, Canned . . . U. S. Marine Corps Field Ration D . . . U. S. Army Meat and Vegetable Hash . . . TNT Dangerous, Corps of Engineers."

There's a container for dried human blood in the picture, too. For transfusions in the field. Another to house a delicate motor on anti-aircraft guns.

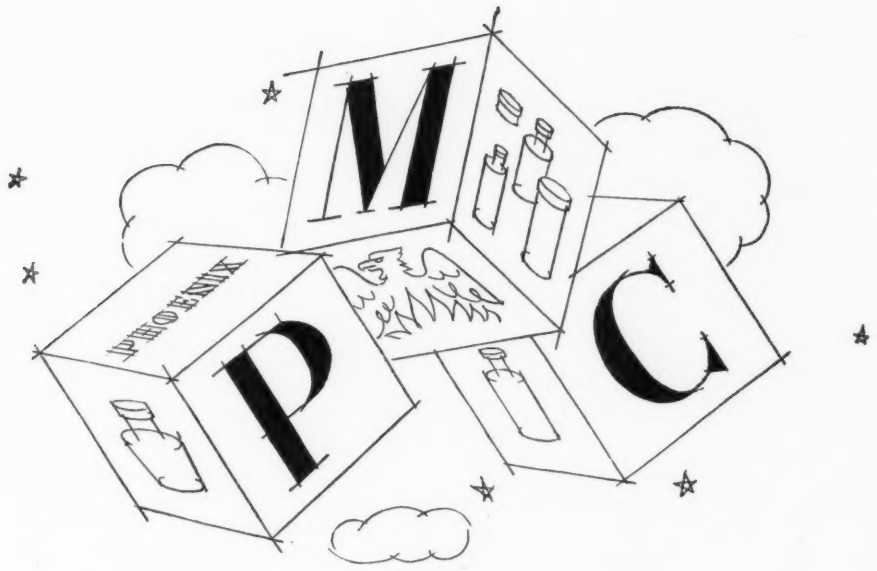
And while you'll be interested to know that these articles are some of the many defense items the containers for which are made by the can-making and packaging industries, their significance goes far beyond this simple fact.

For they are weapons. "Non-secret" weapons, if you will. And every country has them. *But the Axis would like to have ours.* Do you realize why?

The industrial resources that produced these "non-secret" weapons are the largest in the world. The Axis needs those resources.

It needs the men . . . the machinery . . . the skill . . . the research that make the quality and the quantity of these weapons possible. It needs the energy of the free, unregimented economy which produced these weapons.

We Americans can congratulate ourselves that the Axis hasn't these resources . . . that we—not the Axis—have built the greatest packaging and can-making industries in the world . . . that we are now using the sinews of these industries to resist aggression. American Can Company, 230 Park Avenue, New York, N. Y.



THESE ARE DAYS of simplification and standardization. Elimination of unnecessary details of construction. Reduction of styles and sizes. Here is a principle, a goal, of every industry. No less a principle and a goal of the packaging industry.

All raw materials may be obtained only in reduced, or controlled, volume. Certain raw materials may not be obtained at all. Conditions are likely to become worse before they become better.

Because of this, hardships are being inflicted upon users of packaging materials, and upon fabricators of these materials. But the outlook is not entirely one of gloom and resignation. Some of these hardships are temporary. Others may be turned to advantages . . . advantages that will last long after the Emergency has become only a chapter in history books.

During the years of the Depression, packaging got out of hand. In an effort to produce sales where sales did not exist, many packagers of the products of commerce adopted wrappings and decorations which added nothing to the nutritional, medicinal or utility value of their products, or the convenience of their use.

Now, these packagers may return to first principles. Eliminating unnecessary details of construction, reducing the sizes and styles of their packages. And, without loss of prestige or sales. All of their customers will understand . . . and applaud.

The Phoenix Metal Cap Co. has long been an advocate of simplification and standardization. Today, they bend their energies toward even greater simplification and standardization . . . to better serve their country, their customers and the consuming public.

PHOENIX METAL CAP CO.

2444 West Sixteenth Street
CHICAGO

3720 Fourteenth Avenue
BROOKLYN

CHARLES A. BRESKIN, Publisher
CHRISTOPHER W. BROWNE, Editor
PEARL HAGENS, Managing Editor
IRIS VINTON, Associate Editor
DONALD R. RUTHER, Art Director

Modern Packaging

JANUARY 1942
VOLUME 15 NUMBER 5

We're Taking the Medicine Too

If this issue of Modern Packaging seems not quite up to its usual appearance, you will know it is because we are getting into step in the matter of shortages. For months we have been forecasting what shortages would do and knew that they would affect us too. Now we are proud to do our share of going without things we should prefer to have. Our type size has been reduced to conserve paper and yet present useful information. Our engravings are smaller and fewer to conserve space and metal. We've eliminated some of the color and decorative features we would use in normal times. But these times are not normal. When normal times come again we will return to these luxuries of publishing. But today we apologize with pride for adopting a policy of simplicity for the duration.

● DEFENSE

Materials for War Come First ... 27
Table showing Material Shortages and What to Use in Place of Them ... 28
Round Two Coming Up! (Current Digest) ... 38
1941 Preparedness for the Emergency of 1942 (a Review) ... 39
1. Conservation Measures ... 39
2. Materials and Substitutes ... 43
3. 1941 Debuts ... 47
4. New Machinery ... 52
London Editor Looks at the Future ... 56

● GENERAL

Design Histories ... 32
Toiletries the Way Men Like Them ... 34
Packaging Pageant ... 36
Cellulose Wadding Molds and Pads ... 60
Merchandise on Cards ... 62

● DISPLAY

Millions of Impressions Can Become Sales ... 69
Display Gallery ... 72
Dolls Prove the Power of Miniature ... 74

● TECHNIQUE

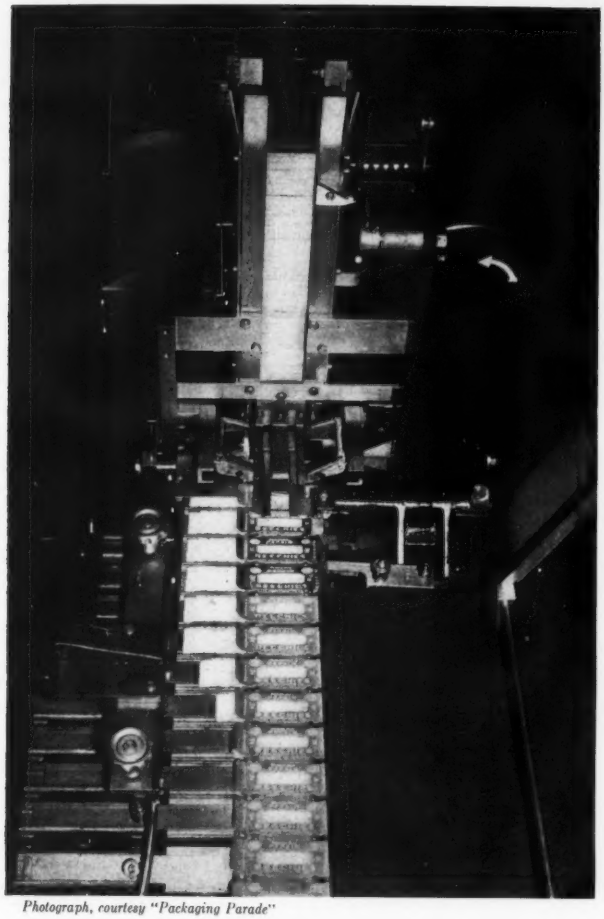
Merck Safeguards Packaging Department Against Fire ... 79
Drawn Rigid Plastic Containers and Displays ... 83
Ethylcellulose Sheeting in Package Fabrication ... 88

● DEPARTMENTS

U. S. Patent Digest ... 64
Equipment and Materials ... 94
Plants and People ... 96
For Your Information ... 98

ALAN S. COLE, General Manager
WALTER S. ROSS, Promotion
L. B. CHAPPELL, Los Angeles
P. H. BACKSTROM
M. A. OLSEN
J. M. CONNORS
R. L. DAVIDSON
F. L. POSNER, Circulation
E. R. GORDON, Production

Published the 1st of each month by Breskin Publishing Corporation. Publication office, Twentieth and Northampton Sts., Easton, Pa. Executive and Editorial Offices, 122 E. 42nd St. (Chanin Bldg.), New York, N. Y. Phone ASh land 4-0655. Mid-Western office, 221 N. LaSalle St., Room 1338, Chicago, Ill. Phone Randolph 6336. Pacific Coast Office, 427 West 5th St., Los Angeles, Cal. Cleveland, Ohio, Office, 1010 Euclid Ave. Phone Prospect 2020. Also Publishers of Modern Plastics, Packaging Catalog and sponsors of the All-America Package Competition and the Modern Plastics National Competition. Subscription $5.00 per year in United States; Canadian, $5.50; foreign, $6.00. Two year subscription United States, $8.00; Canadian, $9.00; foreign, $10.00. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange. Price this issue, 50c per copy. Copyright 1942 by Breskin Publishing Corporation. All rights reserved including the right to reproduce this book or portion thereof in any form. Printed in U. S. A. Member of the Audit Bureau of Circulations. Acceptance under the Act of June 5, 1934, at Easton, Pa. Authorized October 7, 1936.



Photograph, courtesy "Packaging Parade"

108,000 Beechies

AN HOUR CARTONED ON REDINGTONS

- - - 12 pieces to a "Cellophane window" carton

Unusual speed, neatness and efficiency mark any Redington packaging machine on the job. At Beech-Nut Packing Co., for example, a flood of Beechies are cartoned and Cellophane wrapped on ruggedly built, properly designed *combination* machines producing the famed 5¢ Beechies package.

No simple operation, this. The Beechies must be taken from a hopper and assembled neatly in two rows of six pieces each. The count is checked and if a shortage occurs, the assembly is discharged from the machine minus a carton . . . this, plus skip carton mechanism, guarantees that short-count or empty packages will not be shipped by mistake at Beech-Nut. Without handling, the filled cartons are discharged into the Cellophane wrapping attachment. A wrapper is then applied plus easy opening tape.

Fifty-one Redington packaging machines of various types have been ordered by the Beech-Nut Packing Co. since 1912 . . . for wrapping sticks of chewing gum . . . for both the 1¢ and the 5¢ Beechies carton . . . for cartoning and wrapping other packages.

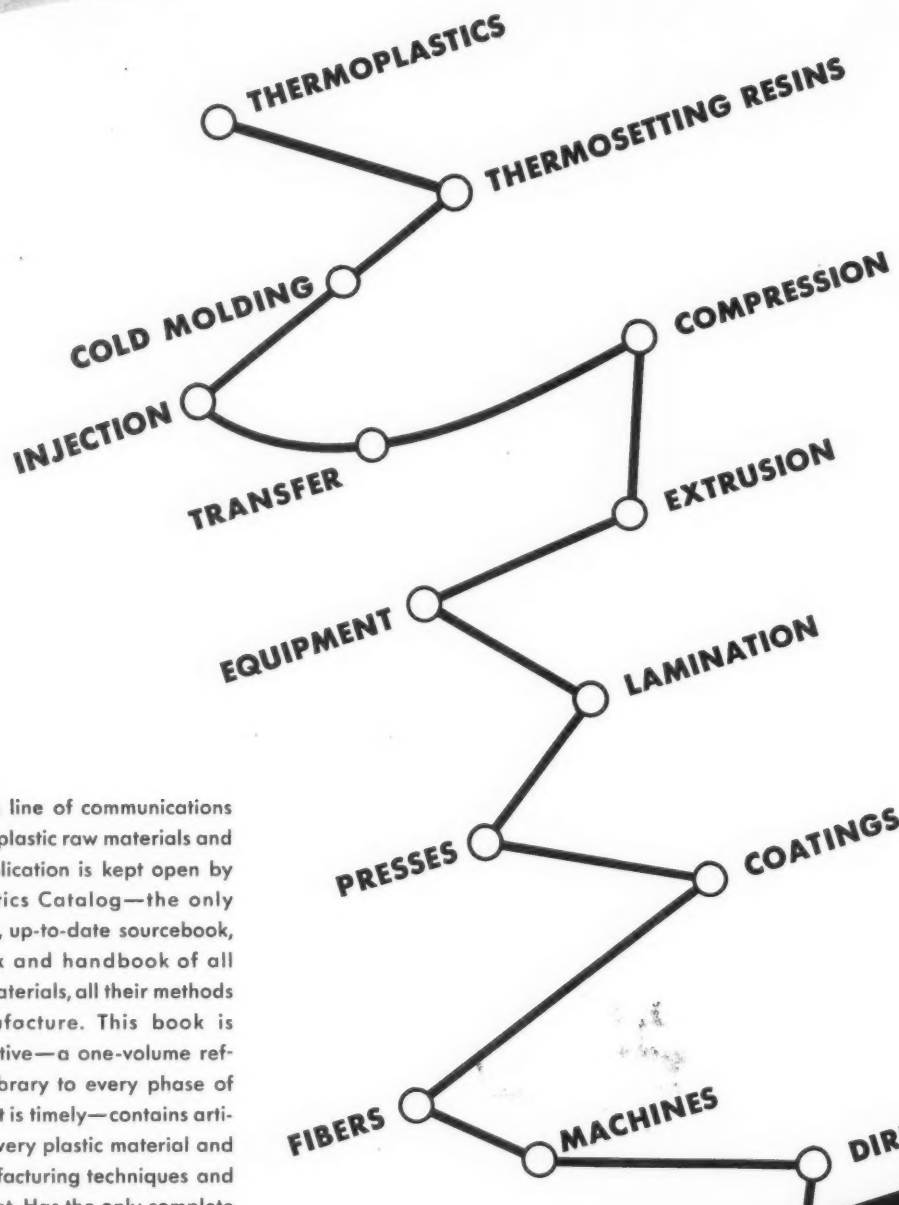
Perhaps we can help you with your package production, too!

F. B. Redington Co. (Est. 1897) 110–112 So. Sangamon St., Chicago, Ill.

REDINGTON PACKAGING MACHINES*

for CARTONING • WRAPPING • SPECIAL PACKAGING

Line of Communications



Industry's line of communications between plastic raw materials and their application is kept open by the Plastics Catalog—the only complete, up-to-date sourcebook, textbook and handbook of all plastic materials, all their methods of manufacture. This book is authoritative—a one-volume reference library to every phase of plastics. It is timely—contains articles on every plastic material and all manufacturing techniques and equipment. Has the only complete directory to the plastics industry and suppliers. 634 pages.

price $5 per copy

PLASTICS CATALOG CORP.
122 East 42nd Street • New York City

Damask — *Wild Rose - 276*

OUR SUGGESTION FOR JANUARY

Perhaps never before has an embossing design lent itself so well for all kinds of box coverings. In Damask, you see a lace effect suitable for small as well as large boxes, in keeping with to-day's style.

If you haven't received our new Damask Sample Book write to-day for a copy. Select from it the colors you desire and send for large work sheets from our files.

Hampden

GLAZED PAPER AND CARD COMPANY

Holyoke, Massachusetts

SALES REPRESENTATIVES

Chicago, Ill. — 500 So. Peoria St.

Philadelphia, Pa. — 414 Bourse Bldg.

New York, N. Y. — 60 East 42nd St.

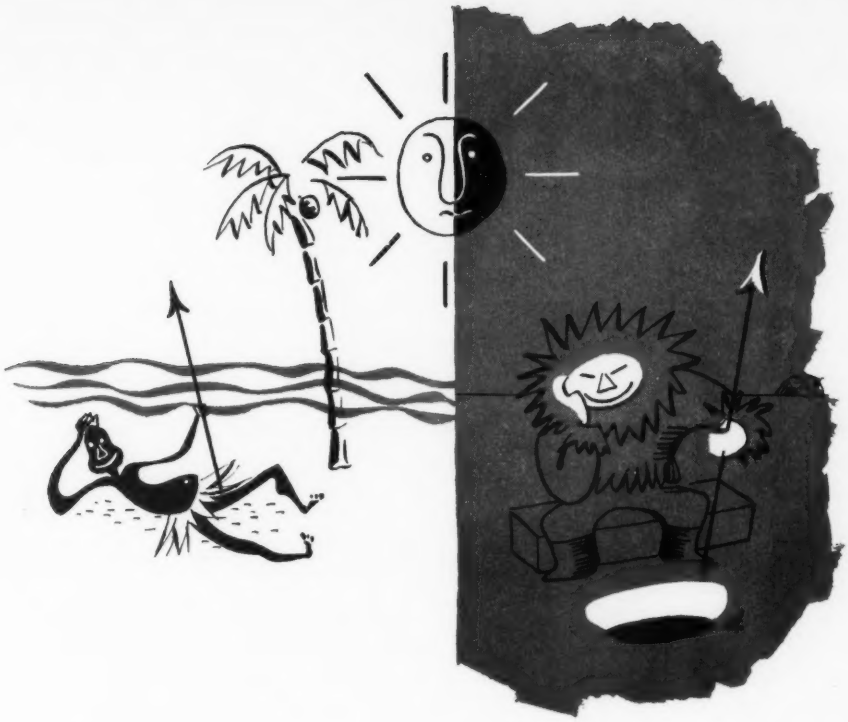
San Francisco, Calif. — 420 Market St.

Toronto, Canada — 137 Wellington St. West

Fred'k. Johnson & Co., Limited — 234, Upper Thames Street — London, E. C. 4, England

Seattle, Wash. — 1203 Western Ave.

Dallas, Texas — 3905 Amherst Ave.



"SOME LIKE IT HOT, SOME LIKE IT COLD"

Stock Bottle #401 — 13 oz. Designed specially for Bath Salts but suitable for many other products. Made for a 400-40 MM Cap.

THE people who consume your product may be poles apart in income and personal habits. Some of them own television sets, others don't believe that radio is here to stay. They may have voted for Willkie or Roosevelt—but they've one thing in common: they buy what you sell.

It's obvious that the more people you appeal to, the more divergent tastes you have to reconcile. So why not ease your path by selecting a package for your product that has the widest acceptance? Why not use glass?

Everybody likes glass. Everybody buys products packaged in glass. And more and more of them are buying cosmetics, drugs, foods and household products packaged in Carr-Lowrey flint glass bottles and opal jars.

CARR-LOWREY 3-Point Service

creates

PRACTICAL · ATTRACTIVE · ECONOMICAL

glass packages for cosmetics, drugs, foods, household products.

Carr-Lowrey Glass Co.

Factory and Main Office: BALTIMORE, MD.

New York Office: 500 Fifth Ave. • Chicago Office: 1502 Merchandise Mart

This is

★ ★ ★ ★ ★ ★ ★ ★

Industry's Order of the Day

Carry On!

December 8, 1941 — **AMERICA IS AT WAR.** In building strength to gain victory, a great many industries must go on producing *consumer* goods. Today, as in 1917 . . .

—it is important that U. S. man power and plant capacity—both for defense and essential goods—be operated a full 100%.

—consumer goods must be kept flowing into the pool of national wealth to help maintain the Nation's economic health.

Not so easy these days! But American leadership has never yet found *any* job it couldn't lick.

Along with the glass industry, we're doing our part. In an industry that normally works 24 hours a day, a step-up in production isn't easy. But, to the utmost limits of our ability, we will deliver. For packages are important in defense. Without containers to preserve them, milk, food—countless "perishables" would be wasted. Without bottles and jars, drugs and chemicals could not be stored and marketed. Even the flow of needed doctors' prescriptions would be stopped.

Yes, there will be a constant flow of Owens-Illinois packages. And they will be *good* ones. For no matter what it takes, we promise you this: The standards we have set for Duraglas containers will be zealously maintained—both now and after this crisis has passed.

★ ★ ★

OWENS-ILLINOIS
GLASS COMPANY TOLEDO, OHIO

PRINTING ★ PACKAGING

CONVERTING ★ PAPERS

Glue spreads evenly over paper that's truly level★

GLUE collects in soft spots . . . into paper valleys. It skids over hilltops . . . leaves hard spots barren. Uneven spread is a bane of the set-up box makers existence. He welcomes the paper with the *truly level* surface. It means no wrinkles, no bubbles, no blisters, no blotches.

Wherever Fitchburg Truly Level Base Stock Papers are used, *truly level* saves machine time and steps up production. It endows paper with a surface affinity . . . more receptive . . . more retentive . . . more faithful to impregnating, bonding, laminating, superimposing substances and materials.

Truly level is a natural process, produced *while paper is on the machine.* No after-processing. Nothing added. It is a plus value. It serves the many and varied physical and chemical characteristics required of custom-made paper.

These Fitchburg Truly Level Base Stock Papers are developed to meet specific needs of creative printers, lithographers, laminators, box makers and other converters serving the packaging industry . . . and to fulfill the often all-important demand for *an ideal foundation.*

ALKALI PROOF PAPERS
for soap, chemicals, dyes, etc., or wherever an alkali condition exists

★ BOX WRAP
including Snowhite-Stiktite, an exclusive Fitchburg development

GUMMING
with the strength and surface qualities for your particular needs

PRINTING PAPERS
Uniform register on "Fitchburg Finish" aids printer and lithographer

COATING BASE STOCK
for flint, friction and plate finishes. Special grades for greeting card, printing and embossing

LACQUERING PAPERS
with a surface specially adapted to lacquer applications

BOARD LINING
and Combining Papers, both free and groundwood, for board mills and box makers

FOIL MOUNTING PAPERS
developed after years of research

PYROXYLIN PAPERS
High super finishes to secure best results with minimum of coating solution

Do the uses of these foundation papers suggest the solution to some sales-research-development problem? Then let us collaborate. We offer equipment, facilities and personnel with a background of eighty years knowledge, training and experience.

Fitchburg Paper Company

250 PARK AVENUE, NEW YORK CITY Mills: FITCHBURG, MASSACHUSETTS 11 SOUTH LASALLE STREET, CHICAGO

The zoo that let the bars down on packaging

SUPPOSE you are strolling in the famous Bronx Zoo. Suddenly you stop, stare, rub your eyes.

Right in front of you are a dozen or more loose lions. There's nothing between you and them to keep you from becoming their next meat course. What would you do?

Well, if you were really jittery, you might head for the nearest tree. But if you took a close look, you wouldn't. You'd see a wide, dry moat, 16 feet deep, that keeps the lions in their place, perfectly harmless. A new departure? Certainly.

For there are no bars in the lions' cages at the Bronx Zoo today. In fact, there are no cages. The lions retire to houses that look like the stockades of Africa.

There's a new packaging idea for you! The old gave way to the new—and proved to be mighty successful.

Often a new packaging idea will lead to bigger and better sales for manufacturers. That's why Continental's packaging experts devote so much of their time to creating new and better packages, new designs, new uses of color.

Continental is a pioneer in creating packages that sell. And we develop containers for consumer convenience, product protection, high-speed filling, and other factors that affect the balance sheet.

Our packaging experts know every angle of packaging—from construction to marketing. Whenever you have a packaging problem, why not call for Continental? We are always at your service.

CONTINENTAL CAN COMPANY

New York Chicago San Francisco Montreal Toronto Havana

KIMBLE Moulded CONTAINERS

Individualized

TO CREATE DISTINCTION

For A NEW VERSION OF YOUR *OLD* PACKAGE
A RAPID ACCEPTANCE OF YOUR *NEW* PRODUCT
Consult Kimble

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY • • • • VINELAND, N. J.

NEW YORK • PHILADELPHIA • DETROIT • CHICAGO
BOSTON • INDIANAPOLIS

The *Pliofilm*-lined Flav-O-Tainer bag affords perfect flavor protection coupled with low cost—a combination that has made it an outstanding success among coffee roasters and tea packers. Its unique advantages contribute importantly to better sales and profits.

Better sales because Flav-O-Tainer's air- and moisture-tight seal insures the product reaching the consumer fresh – even after weeks – with flavor and aroma preserved.

Better profits because Flav-O-Tainer costs much less than vacuum packs, and little more than ordinary paper bags.

Flav-O-Tainer packaging can be adapted to any product whose quality depends on keeping air or moisture in or out. For full information, write: Pliofilm Sales Department, Goodyear, Akron, Ohio – or Thomas M. Royal & Co., Philadelphia, Pa. Flav-O-Tainer patentee.

Pliofilm—T.M. The Goodyear Tire & Rubber Company

THINGS ARE BETTER PACKAGED IN Pliofilm MADE ONLY BY GOODYEAR

INSIDE NEWS

JANUARY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

National's Research Department Tackles "Panelling" Problems

Probably everyone has, at some time, seen panelled cans. They are objectionable to packers, largely because such cans are unsightly. A can is called panelled, when the sides are drawn in at one or more places, so that the shape of the can is distorted and the sides are no longer parallel. Panelling results from inability of the can body to withstand the atmospheric pressure on it while there is a vacuum on the inside of the can. This vacuum, normally present in filled processed cans, lowers the resistance of the can body to atmospheric pressure, and therefore sensitizes the body to external shock in handling.

Cans may panel because of the build up of an abnormally high vacuum due to improper packing methods. Or cans of normal resistance may panel because of abnormal conditions of handling, including exposure to low temperatures. In shipment cans frequently receive blows which should panel any can, particularly if the vacuum is temporarily increased by exposure of the canned product to low temperatures. However, such conditions are not normal.

A can should be constructed to withstand normal conditions of packing and handling and here, the first, but not the only matter of importance is the weight of the plate. There are various weights of plate, and various sizes of cans, but the selection of the plate weight and other physical properties are not left to guess-work, or even to the valuable guidance of practical experience.

For selecting the proper weight of plate, as one of the first considerations to prevent panelling of a can, the apparatus pictured at right has been devised through the aid of Research: (52)

The operator merely places a sealed empty can of known plate weight in a sealed chamber, and applies hydraulic pressure to the can. He then watches the gauge as the pressure increases, until the needle stops and drops back. At this point, the can wall resistance starts to break down, and panelling starts. From the pressure, the operator calculates the can resistance to vacuum and this figure, with certain other correlated data, enables him to select plate of the proper weight for the size can he is studying. RESEARCH IS ORGANIZED THINKING.

Something New for '42

National's Chicago Plant Nearing Completion

National Can's new manufacturing plant is rapidly nearing completion. It will be in service at the start of the 1942 season, supplying cans to the trade.

Located in the heart of the strategic Chicago area at West 51st Street and South Austin Ave., National's new plant is accessible to the main highways and railroads of the nation's greatest food-growing region.

It is another strong link in National Can's expanding chain of modern manufacturing plants. Dedicated to the many canners who are part of the National family, this new unit will help them meet the increasing responsibilities of supplying the food requirements of a nation at war. (53)

Anti-Corrosive Paint and Blitzed Machinery

In England, immediately after a blitz, anti-corrosive paint is now being sprayed on machinery of all kinds which has become wet or covered with debris. This is sprayed among the vital parts of the machinery by stirrup pumps, using the fine jet. Anti-corrosive fluids can be easily removed and machines put in running condition with a minimum of delay. This procedure is saving machinery which would rust and deteriorate before the salvage

(Advertisement)

BY
NATIONAL CAN

JANUARY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

department could remove it from the gutted premises. (54)

Sleepy Vegetables for Canning

Believing that it will be possible to keep vegetables fresh longer in storage, research men at an agricultural experiment station are conducting experiments with methods of "putting the vegetables to sleep." The procedure is similar to that used with apples. The vegetables are stored in an atmosphere containing controlled proportions of oxygen and carbon dioxide. Fruit will last for a year or more in such an atmosphere, since it is a living thing and takes in oxygen and gives off carbon dioxide. But the experiments have already revealed a significant difference between fruit and vegetable storage. A high carbon dioxide content in the storage room inhibits the "breathing" process of apples, but with vegetables it's just the opposite. For this reason it is removed from the air as soon as it is given off. But when the content of oxygen in the air is lowered from the normal amount of 21 percent to 2 to 5 percent, the vegetables "go to sleep" just as if they were kept in cold storage. The rate of the life processes is reduced to one half, which means that without a change in temperature the storage period could be doubled. Vegetables kept under a low-oxygen atmosphere maintained a high sugar content and a good flavor. And with this method of storage a high humidity can be maintained so that there is little moisture loss. (55)

Synthetic Pine Oil

A new process for the production of synthetic pine oil from turpentine gives a product of substantially the same chemical and physical properties as natural pine oil. This new source will aid in satisfying current increased demands due to defense uses.

Special procedure is necessary in the manufacture of soaps from low grade fats and hard water. The use of sodium silicate with a high SiO_2 content increases the specific gravity of the amino acid molecule so that the usual salting out process is successful in eliminating the excess impurities.

A new material is being studied which will lend germicidal properties to soaps, while at the same time avoiding the disadvantages of toxicity, discoloration, odor, etc., commonly associated with use of germicidal ingredients.

A new method has been offered for the testing of water soluble and water miscible fungicides used in the prevention of the spread of athlete's foot. (56)

Two Years From Seeds to Fruit

Two years from peach seeds to fruit bearing trees! Old Mother Nature's ordinary methods of growth have been speeded up in a series of experiments with embryo culture, recently conducted in California.

The experiments were conducted over a five-year period. Over 5,000 cross pollinated seedlings were grown, most of which were embryo cultures.

Peach seeds were cracked and the kernels removed. These embryos were grown in a nutrient solution of agar, sugar and Vitamin B_1 for two or three weeks. When large enough to transplant, they were placed in clean, washed sand. Three weeks later they were transferred to pots and in nine months to the field.

When this routine is followed, it takes approximately two years for the peach seed to become a fruit-bearing plant. It also results in a much higher percentage of germination of most peach crossed varieties. (57)

Huge Quantities of Paint for Minesweepers

According to reports from Canada their tiny minesweepers alone require 516 gallons of paint for protection against the elements. This quantity includes 20 gallons of red oxide paint, 83 of red lead, 10 of tinting colors, 78 of aluminum paint, 10 of boot topping, 45 of black (non-corrosive), 20 of anti-fouling paint, 100 of battleship grey (marine paint), 50 of flat white, 40 of semi-gloss enamel (interior) and 60 of cork paint. (58)

Lactic Acid from Grapefruit Juice

Discovery of a practical method of making lactic acid from grapefruit juice has been announced by one of the research laboratories of the U. S. Department of Agriculture. Screened grapefruit juice is first treated with calcium carbonate, precipitating the citric acid. The juice is then heated rapidly to 105 deg. F. and allowed to ferment. A little calcium carbonate is added to precipitate out all of the citric acid remaining. And finally the juice is concentrated and the crystals treated with dilute sulphuric acid. The result is said to be pure lactic acid. (59)

Paint Helpful in Blackout

London motorists paint bumpers, fenders and edges of their running boards white to serve as a traffic safety measure during blackouts. To retain the advantages of traffic lights, yet increase the effectiveness of the blackouts, all but a small portion of the glass lenses are obscured with paint. (60)

Technical Topics

PROPYLENE GLYCOL is not harmful when used in flavoring and other foodstuffs, according to a recent ruling by the Food and Drug Administration. Careful investigation has not indicated that there are any harmful effects in the amounts used in foods. (61)

A PASTEURIZER for liquid foods which very quickly brings the product up to pasteurizing temperature without utilizing a high-temperature heating medium has been invented. Heat is applied by spraying hot water against the sides and bottom of a vessel containing the product to be pasteurized, the product being agitated to speed the heat transfer, when the spray is cut off, heating stops completely, avoiding overheating. (62)

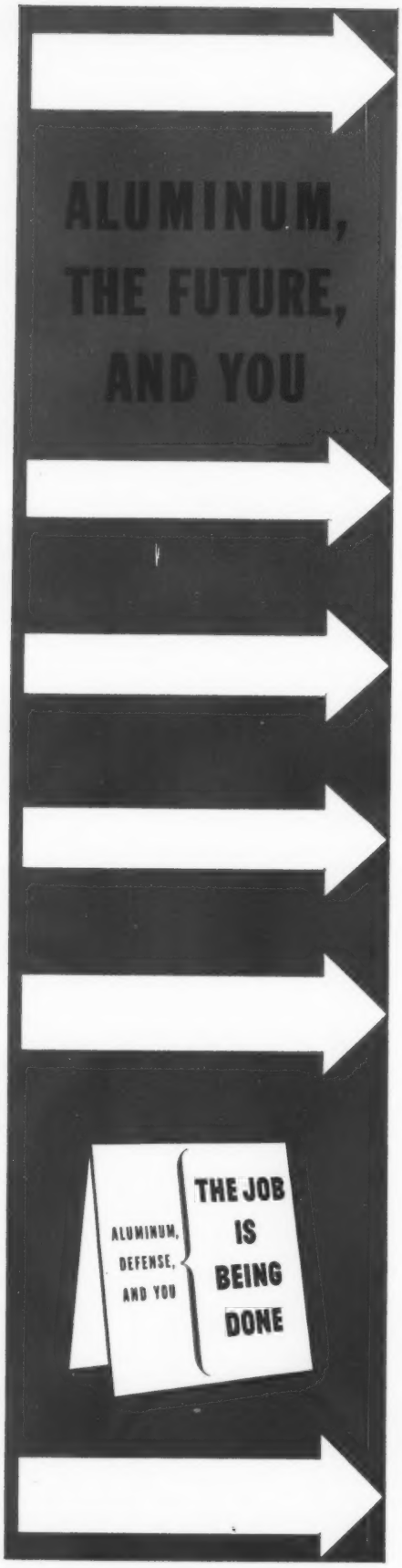
STRONTIUM SULPHIDE is proving popular as a phosphorescent material in the manufacture of luminous paints in Britain. The strontium sulphide compositions are preferred to the zinc and calcium sulphide types of phosphorescent materials, it is declared, since they can be made to give a more persistent and more visible blue-green glow. The most satisfactory means in which the strontium sulphide luminous compositions may be utilized, it has been found, is to enclose them between sheets of glass, and waterproof the edges of the sandwich thus formed. Compositions applied as paint in the regular manner have been found to lose luminescent efficiency after a short exposure to the weather. (63)

A PERFUME OIL extracted from coffee-flowers was among the tropical crop experiments described before a recent Puerto Rican scientific agriculture meeting. Samples of the oil were reported as having been highly praised by essential oil dealers in a "blindfold" test. (64)

MICA POWDER, talc, fish scales, and similar scaly substances insoluble or only sparingly soluble in the solvents used in paint removers are suggested by a new British patent for use in the latter type of products, to retard evaporation of the volatile solvents and so facilitate treatment of large areas and promote a more complete action by the paint remover. The scales form a "skin" which retains the solvents, it is stated. (65)

For further information on any of these articles write to National Can Corp., 110 E. 42nd Street, New York City.

(Advertisement)



RIGHT NOW OUR FACTORIES have only one interest: to make more Defense Aluminum than the world has ever seen before. Every resource we can muster is concentrated on that job.

WHEN AMERICA HAS WON THROUGH to make the world safe for our children to live in . . . the saying is: What a lot of aluminum is going to be available for everybody.

THE REAL POINT TO PONDER is how to get set to make that deluge of light metal work for you. In the kind of world we're going to have, sure as fate, the man who fails to call, *now*, on every resource at his command is going to be left at the post.

WE'VE COINED A WORD:

IMAGINEERING. It's the fine art of deciding where you go from here. It's the act of thinking out what you are going to face, and doing something about it now. *Imagination* plus *engineering* is a formula for the future you're going to hear more about.

A MAN CAN be producing for Defense at top speed and be imagineering at one and the same time. In fact, the more he is devoted to Defense now, the more he needs imagineering for ***THE DAY WHEN.***

OBVIOUSLY, you can imagineer with steel, copper, glass, zinc, plastics, or what have you. We hope you will, because the world is going to need better use of all materials than it ever saw before.

THE CLOSER YOU GET TO FUNDAMENTALS the more quickly you must decide that the great need is going to be for the very things Alcoa Aluminum does best: Lightness with strength, resistance to corrosion, reflectivity, workability and all the rest of its powers all wrapped up in a low-cost package full of unlimited possibilities for you, personally, in your business.

TWO HEADS ARE BETTER THAN ONE. Already, many an industry, many a company, has called us into an imagineering session. We've seen things projected that will make news when the curtain can be lifted. Usually we've been able to help with some imagineering of our own.

DOES THIS SUGGEST ACTION? WE HOPE SO.

Aluminum Company of America, Pittsburgh, Penn.

ALCOA ALUMINUM

CURRENT efforts of brain and brawn, man and machine will determine how far today's concerns will go *tomorrow.* To manufacturers now "on their mettle" to meet the challenge of future merchandising needs, Hinde & Dauch offers the facilities of the Package Laboratory. Just as H & D's 25 mills and factories are now working full time to produce shipping boxes for hundreds of items, from shells to shoes, H & D's Package Engineers are ready to "deliver" for manufacturers seeking authoritative packaging recommendations and services.

New standards of simplicity, effectiveness, economy, practicality are continually being established as H & D Package Engineers work full time on corrugated package development. Perhaps the adaption of one or more of these corrugated achievements will save you dollars today, as well as precious time tomorrow.

These services include the study of your product, your market, your complete packaging program; the development of corrugated packages to meet the situation squarely; the preparation of packages which are more simple, more economical, more effective . . . depending upon your objective. H & D can perfect the packages you need to complete tomorrow's merchandising program so that it can be "stored" as a unit, ready to roll when business gets the signal to go ahead. Write us today. There's no obligation.

SAVE WASTE PAPER

HINDE & DAUCH *Authority on Packaging*

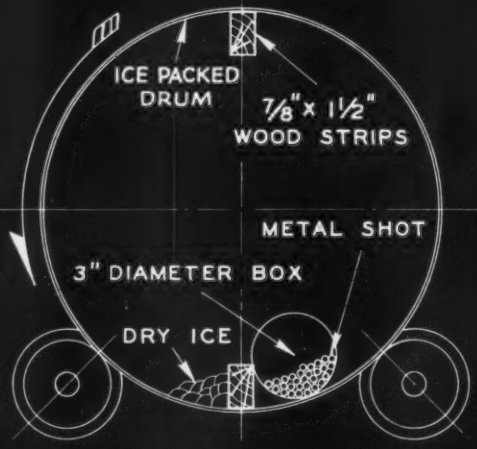
4214 DECATUR STREET, SANDUSKY, OHIO

FACTORIES in Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J. • Hoboken
Kansas City • Lenoir, N. C. • Montreal • Muncie • Richmond • St. Louis • Sandusky, Ohio • Toronto

UNDER FIRE *at 50 below!*

THIS BOX drawn from crystal-clear ETHOCEL* SHEETING (0.010") was selected at random for the durability and cold test.

LOADED WITH 100 GRAMS of BB lead shot to accelerate the test, the box was ready for exposure to severe punishment seldom encountered by ordinary packages.



THEN THE TRANSPARENT box was placed in the dry ice-packed tumbling device. Temperature quickly fell to 50° below zero. The rotating drum dropped the box 10" THIRTY-FIVE times a minute!

For two long hours the transparent box withstood the severe punishment. Whirling and dropping—up and down—4200 impacts in all before this remarkable packaging material showed signs of weakening—a test of endurance far greater than any ordinary package must ever withstand!

TOUGHNESS AT LOW TEMPERATURES MAKES ETHOCEL SHEETING OUTSTANDING

DURING the cold winter months, low temperature flexibility is of prime importance in transparent packages. Containers that bear the burden of constant handling throughout the year, must stand up under the additional punishment of subzero weather. Unless this vital requirement is met, boxes crack or weaken—and manufacturers must accept large numbers of rejects.

The durability and cold test described above convincingly demonstrates the toughness of ETHOCEL SHEETING at low temperatures.

This outstanding packaging material is made of Ethylcellulose, the toughest cellulose material commercially available. As a result, ETHOCEL SHEETING offers many important advantages. It will not crack or warp—will not become brittle with age. Even prolonged exposure to light causes no discoloration to ruin packages and spoil sales.

ETHOCEL SHEETING offers a definite contribution to *visible* sales appeal in beautiful, transparent packages. Get the whole ETHOCEL SHEETING story today by writing to the Plastics Sales Division.

ALWAYS READY FOR FABRICATION

Even when ETHOCEL SHEETING arrives at your plant in subzero weather, no preconditioning is necessary before fabrication.

It is unusually tough and flexible . . . not embrittled by heat . . . easily sealed and heat formed . . . can be riveted, stapled or punched without cracking . . . permits deep draws . . . can be crimped with metal without breakage . . . is readily printed.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York, St. Louis, Chicago, San Francisco, Los Angeles, Seattle, Houston

*Trade Mark Reg U. S. Pat. Off.

Ethocel Sheeting

DOW ETHYLCELLULOSE

DOW

ONE WAY WE ALL CAN HELP

★ LIKE OTHER PRODUCTS, many defense items must be packaged for protection and transportation. With Ritchie, as with other leading package manufacturers, production for these defense needs must come first. We know you want it that way too—even though it might possibly mean sacrifice on your part as well.

We all can help by conserving paper. Don't use it unnecessarily. Save and sell your waste paper. It's one simple but effective way you can aid defense—and help to insure a more nearly normal supply of the packages and other paper products you yourself need.

LOOKING AHEAD

Through enlarged production facilities now partially devoted to defense production, Ritchie is laying the groundwork for improved packaging techniques and economies in the years ahead. At the same time, we are making every effort to supply our customers with the packages they require.

W. C. Ritchie AND COMPANY

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

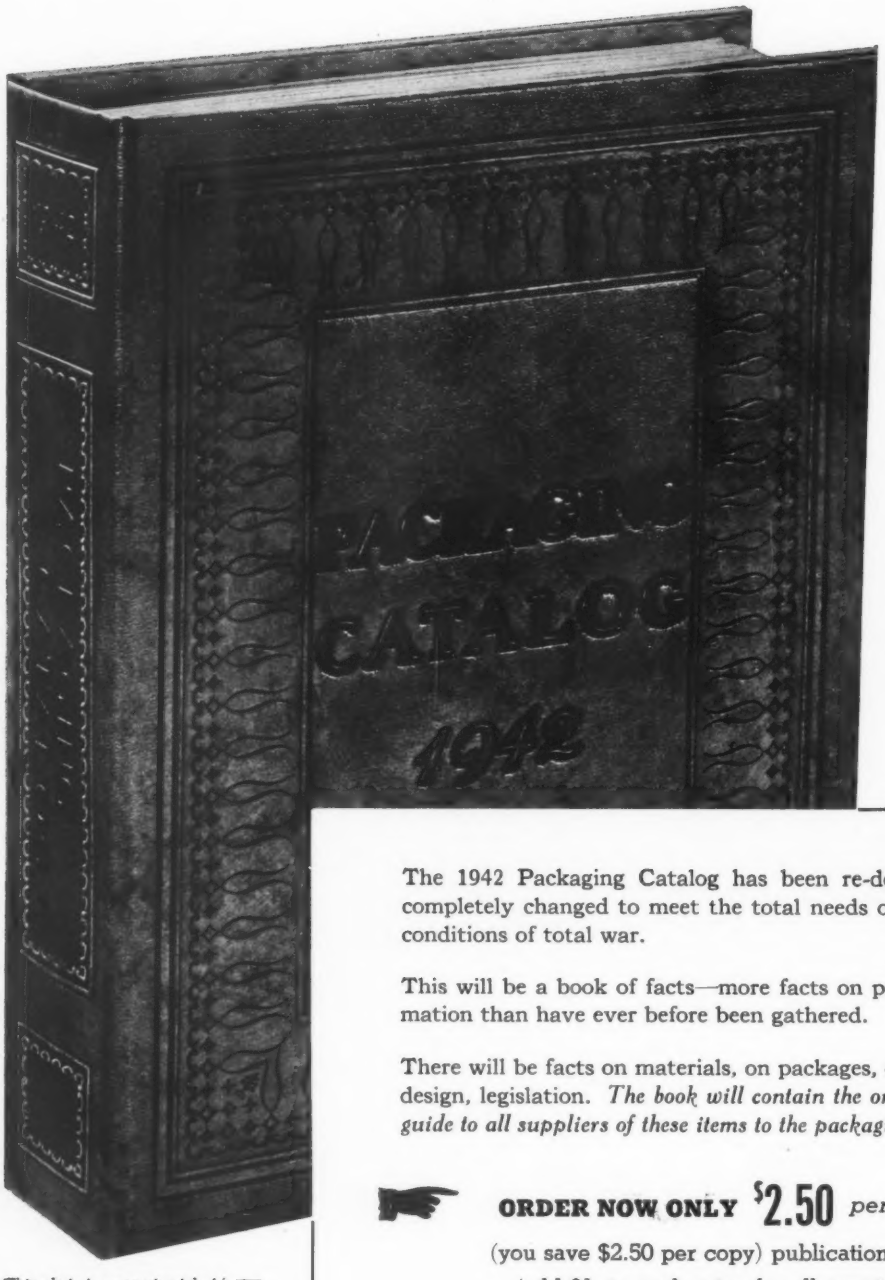
8841 BALTIMORE AVENUE • CHICAGO

NEW YORK DETROIT LOS ANGELES ST. LOUIS MINNEAPOLIS DENVER MIAMI

New! for 1942

answers questions on

SUBSTITUTIONS
PRIORITIES
SHORTAGES



(This photo is approximately 1/3 size —actual size: 9" x 12")

FACTS
DATA
FIGURES
CHARTS
Authoritative
Information

THE PACKAGING CATALOG IS THE ONLY CATALOG OF PACKAGING: THE ONLY COMPLETE AND UP-TO-DATE SOURCEBOOK, HANDBOOK, TEXTBOOK OF PACKAGING.

The 1942 Packaging Catalog has been re-designed, re-written—in fact, completely changed to meet the total needs of packagers operating under conditions of total war.

This will be a book of facts—more facts on packaging, more usable information than have ever before been gathered.

There will be facts on materials, on packages, on equipment—on priorities, design, legislation. *The book will contain the only complete, up-to-the-minute guide to all suppliers of these items to the packaging industries.*

ORDER NOW ONLY $2.50 *per copy, before publication*

(you save $2.50 per copy) publication price will be $5.00

(add $1. to each price for all countries outside U. S.)

1942 PACKAGING CATALOG

122 East 42nd Street, NEW YORK CITY

ALL SEALED AND READY TO SELL

"CEL-O-SEAL" TOPS THEM ALL... FOR EXTRA PROTECTION AND EXTRA BEAUTY! These colorful "Cel-O-Seal" cellulose bands add that note of safety and showmanship that makes customers *notice* and *buy.*

You see, customers like containers sealed with "Cel-O-Seal" because when they purchase they do so with assurance and confidence... knowing the contents are pure and untouched.

So when you think of Customer Confidence, think of "Cel-O-Seal"... the attractive seal that protects.

Listen to "Cavalcade of America," Mon. evening over coast-to-coast NBC Red Network

DU PONT

CEL-O-SEAL
TRADE MARK
BANDS

Sold by

E. I. DU PONT DE NEMOURS & CO. (INC.)
"CEL-O-SEAL" SECTION
Empire State Building, N. Y. C.
ARMSTRONG CORK COMPANY
GLASS & CLOSURE DIV., Lancaster, Pa.
I. F. SCHNIER COMPANY
683-89 Bryant Street, San Francisco, Cal.

Madeleine Carroll and Stirling Hayden in Paramount Pictures' current celluloid epic in Technicolor—"Bahama Passage."

Why "Celluloid" is slang for a motion picture

A day never passes without the phrase "a Celluloid epic" appearing in the newspapers and magazines or coming over the air to describe a motion picture film.

In fact, many years ago, we had to instruct our clipping bureau to pass over these references to our trade name "Celluloid" or the bill for clipping would soon look super-colossal.

The reason this phrase has clung so tight is that members of the Celanese Celluloid organization played two fundamental parts in founding the motion picture industry. First, by giving the world the first plastic, Celluloid—which is the base of all commercial film. Second, in 1890, by inventing the process of making Celluloid in continuous lengths or rolls, which is essential for producing a reel of motion pictures.

That was 40 years before we introduced

LUMARITH PROTECTOID

the new era transparent packaging material.

We cite this case as an everlasting reminder that American inventiveness has a habit of solving problems—including shortages.

Today, Lumarith Protectoid, the first cellulose acetate packaging material, is doing a job in many applications essential for defense—in insulations and communications. Naturally, with this plastic packaging material, whose supremacy is unchallenged in many fields, the shortage problem has raised its ugly head.

But with the vigor that got this business and the plastics industry started, we are solving material problems every day.

Which leads us to end on this note: *to be in on the ground floor in plastics and packaging developments, keep in touch with Celanese Celluloid.*

Celanese Celluloid Corporation

Celanese Celluloid Corporation (formerly Celluloid Corporation), 180 Madison Ave., New York City. Sole Producer of Celluloid* (cellulose nitrate), Lumarith* (cellulose acetate), Lumarith Protectoid* (transparent packaging material), H-Scale* (synthetic pearl essence), Lindol* (plasticizer and lubricant additive), Samson* and Safety Samson* Film Bases, and Vimlite* (Flexible health glass). *Trademarks Reg. U. S. Pat. Off.

SMART PACKAGING MADE INEXPENSIVE WITH *Swindell* STOCK *Bottles*

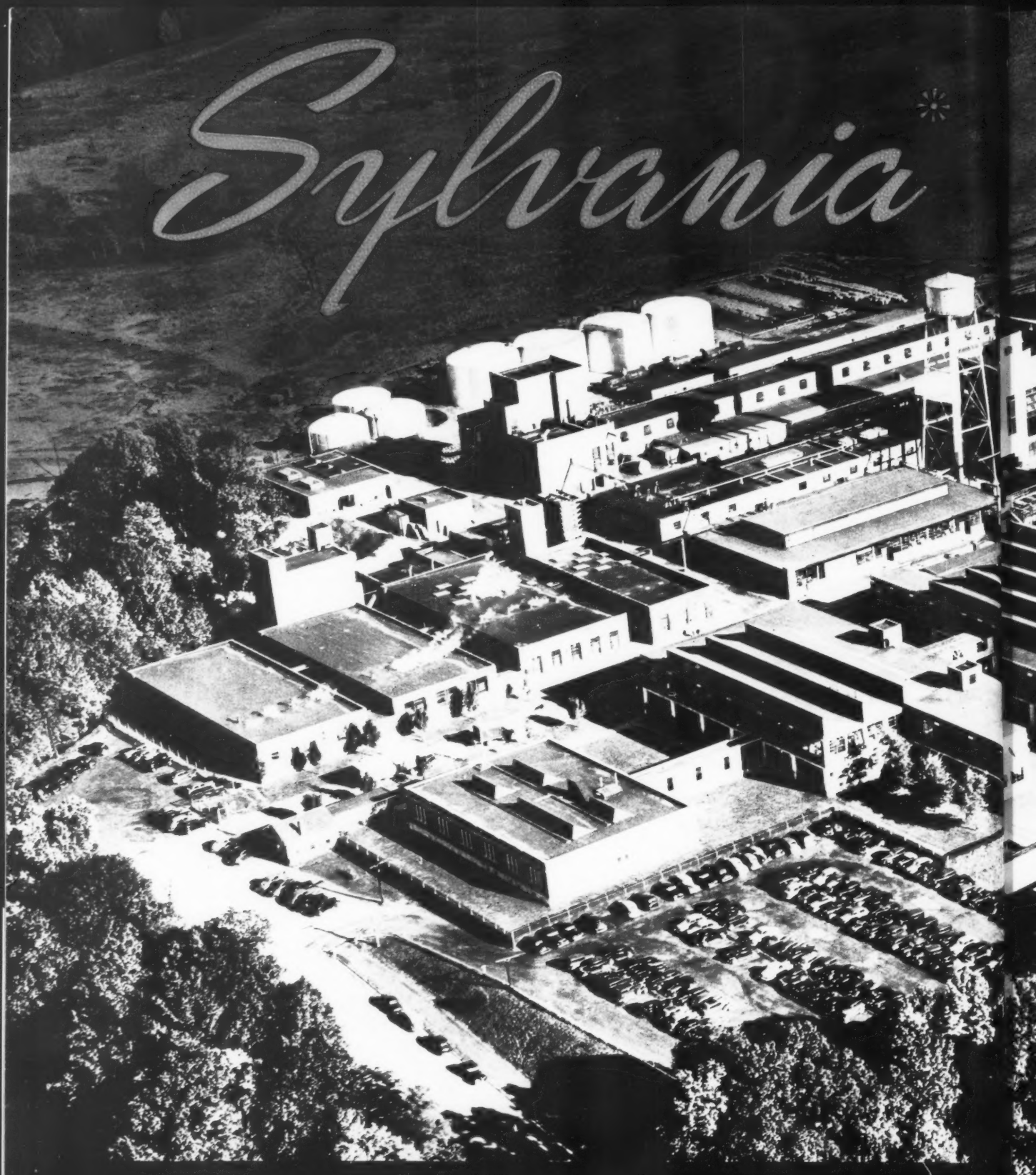
No delays, no "priority troubles," no investments in private moulds—when you choose one of Swindell's smartly designed stock bottles! Here are seven beauties:

J-32: ½ oz. to 16 oz. N-30: ⅛ oz. to 8 oz.
D-62: ½ dr. to 8 oz. A-273: ¼ oz. to 16 oz.
C-39: ½ oz. to 16 oz. A-682: ⅛ oz. to 4 oz.
A-539: ½ oz. to 32 oz.

SWINDELL BROS.
BALTIMORE, MARYLAND
200 FIFTH AVENUE, NEW YORK
ROBERTO ORTIZ—HAVANA, CUBA

When you think of bottles think of

Swindell



SYLVANIA INDUSTRIAL CORPORATION

Executive and Sales Offices: 122 E. 42nd Street, N. Y. — Works: Fredericksburg, Va.

Branches or Representatives:

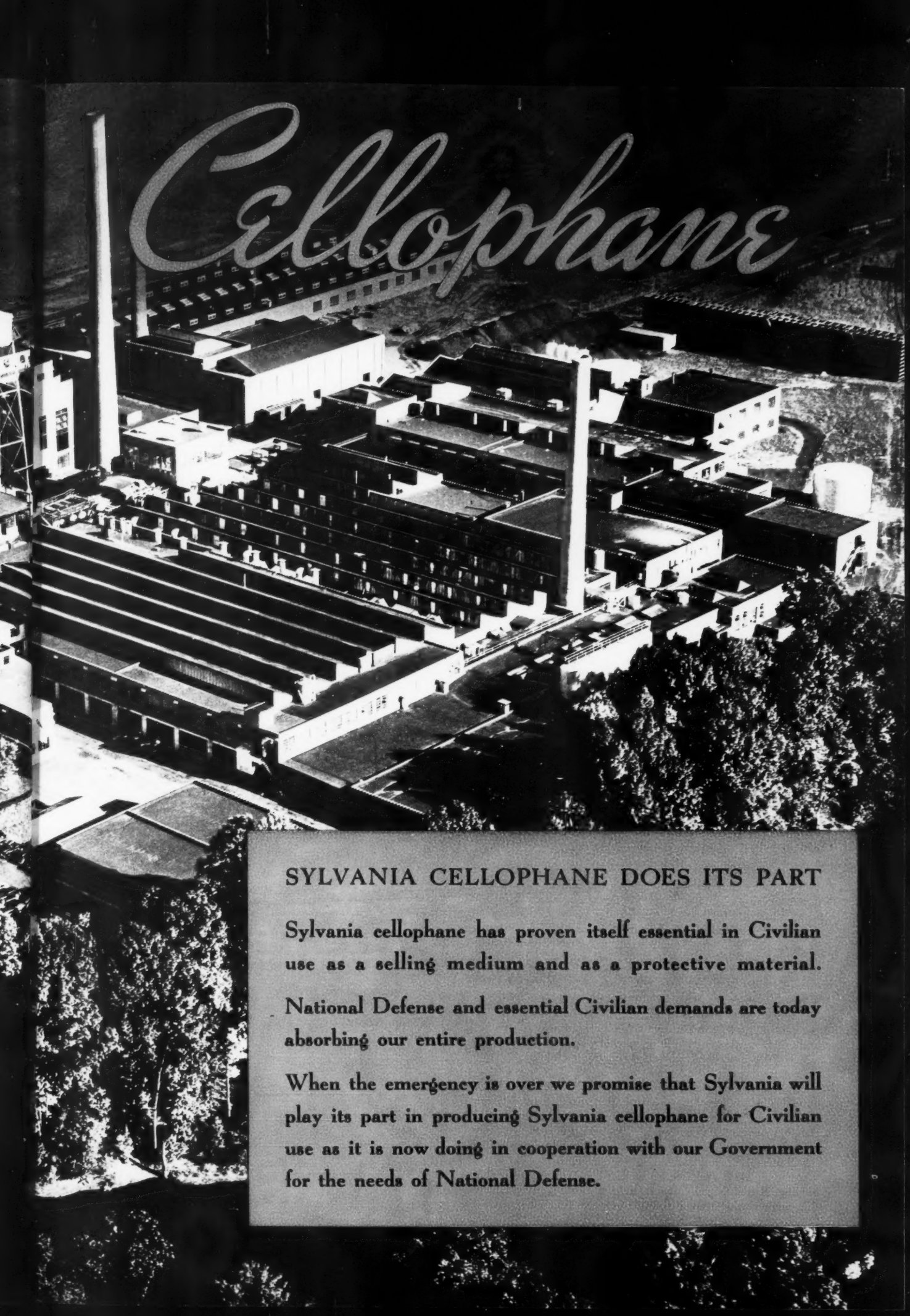
ATLANTA, GA. . . 78 Marietta Street
BOSTON, MASS. . . 201 Devonshire Street
CHICAGO, ILL. . . 111 N. Canal Street
DALLAS, TEX. . . 812 Santa Fe Building
PHILA., PA. . . 260 South Broad Street

SYLVANIA CELLOPHANE

Pacific Coast:
Blake, Moffitt & Towne
Offices & Warehouses in Principal Cities

Canada:
Victoria Paper & Twine Co., Ltd.
Toronto, Montreal, Halifax

*"SYLVANIA" IS A REGISTERED TRADE MARK FOR CELLULOSE PRODUCTS MANUFACTURED BY SYLVANIA INDUSTRIAL CORPORATION



SYLVANIA CELLOPHANE DOES ITS PART

Sylvania cellophane has proven itself essential in Civilian use as a selling medium and as a protective material.

National Defense and essential Civilian demands are today absorbing our entire production.

When the emergency is over we promise that Sylvania will play its part in producing Sylvania cellophane for Civilian use as it is now doing in cooperation with our Government for the needs of National Defense.

Defense Savings Pay-Roll Allotment Plan

How company heads can help their country, their employees, and themselves

voluntary pay-roll allotment plan | helps workers provide for the future | helps build future buying power | helps defend America today

This is no charity plea. It is a sound business proposition that vitally concerns the present and future welfare of your company, your employees, and yourself.

During the post-war period of readjustment, you may be faced with the unpleasant necessity of turning employees out into a confused and cheerless world. But you, as an employer, can do something *now* to help shape the destinies of your people. Scores of business heads have adopted the Voluntary Pay-roll Allotment Plan as a simple and easy way for every worker in the land to start a *systematic* and *continuous* Defense Bond savings program.

Many benefits . . . present and future. It is more than a sensible step toward reducing the ranks of the post-war needy. It will help spread financial participation in National Defense among all of America's wage earners.

The widespread use of this plan will materially retard inflation. It will "store" part of our pyramiding national income that would otherwise be spent as fast as it's earned, increasing the demand for our diminishing supply of consumer goods.

And don't overlook the immediate benefit . . . money for defense materials, quickly, continuously, *willingly.*

Let's do it the American way! America's talent for working out emergency problems, democratically, is being tested today. As always, we will work it out, without pressure or coercion . . . in that old American way; each businessman strengthening his *own* house; not waiting for his neighbor to do it. That custom has, throughout history, enabled America to get things done *of its own free will.*

In emergencies, America doesn't do things "hit-or-miss." We would get there *eventually* if we just left it to everybody's whim to buy Defense Bonds when they thought of it. But we're a nation of businessmen who understand that the way to get a thing done is to *systematize* the operation. That is why so many employers are getting back of this Voluntary Savings Plan.

Like most efficient systems, it is amazingly simple. All you have to do is offer your employees the convenience of having a fixed sum allotted, from each pay envelope, to the purchase of Defense Bonds. The employer holds these funds in a separate bank account, and delivers a Bond to the employee each time his allotments accumulate to a sufficient amount.

Each employee who chooses to start this savings plan decides for himself the denomination of the Bonds to be purchased and the amount to be allotted from his wages each pay day.

How big does a company have to be? From three employees on up. Size has nothing to do with it. It works equally well in stores, schools, publishing houses, factories, or banks. This whole idea of pay-roll allotment has been evolved by businessmen in cooperation with the Treasury Department. Each organization adopts its own simple, efficient application of the idea in accordance with the needs of its own set-up.

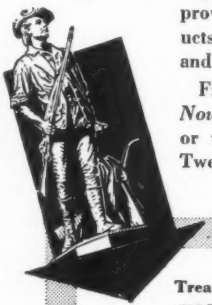
No chore at all. The system is so simple that A. T. & T. uses exactly the same easy card system that is being used by hundreds of companies having fewer than 25 employees! It is simple enough to be handled by a check-mark on a card each pay day.

Plenty of help available. Although this is *your* plan when you put it into effect, the Treasury Department is ready and willing to give you all kinds of help. Local civilian committees in 48 States are set up to have experienced men work with you just as much as you want them to, and no more.

Truly, about all *you* have to do is to indicate your willingness to get your organization started. We will supply most of the necessary material, and no end of help.

The first step is to take a closer look. Sending in the coupon in no way obligates you to install the Plan. It will simply give you a chance to scrutinize the available material and see what other companies are already doing. It will bring you samples of literature explaining the benefits to employees and describing the various denominations of Defense Savings Bonds that can be purchased through the Plan.

Sending the coupon does nothing more than signify that you are anxious to do *something* to help keep your people off relief when defense production sloughs off; *something* to enable *all* wage earners to participate in financing Defense; *something* to provide tomorrow's buying power for your products; *something* to get money *right now* for guns and tanks and planes and ships.



France left it to "hit-or-miss" . . . and *missed. Now* is the time for *you* to act! Mail the coupon or write Treasury Department, Section A, 709 Twelfth St. NW., Washington, D. C.

FREE - NO OBLIGATION

Treasury Department, Section A,
709 Twelfth St. NW., Washington, D. C.

Please send me the free kit of material being used by companies that have installed the Voluntary Defense Savings Pay-Roll Allotment Plan.

Name _____

Position _____

Company _____

Address _____

GPO 428498

The ALUMINUM DRIVE may be over

But . . . . .

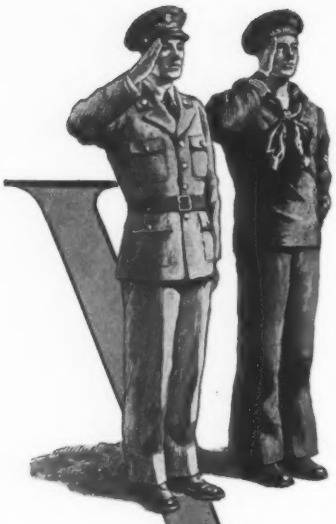
The public aluminum drive may be over, but we're still saving it at the rate of over 4,000,000 pounds a year—a conservative estimate of the amount once used by firms who recently turned to Riegel for the development of new packaging papers. 4,000,000 pounds is many times the entire amount of aluminum used for new equipment by all the paper mills in the country. It's enough to be a real help in meeting the essential needs of your Uncle Sam, nor does it involve the substitution of still other strategic materials.

Today, in many fields of industry—in foods, tobacco, candy, gum—you'll find new applications of Riegel's Protective Papers. You'll find them used for many reasons—to simplify packaging, to cut costs, to conserve scarce materials—but above all else, to perform their customary job of providing practical and economical protection against spoilage, breakage and waste.

RIEGEL PAPER CORPORATION

342 MADISON AVE., NEW YORK, N. Y.

48



WE REGRET but OFFER NO APOLOGIES

If, as and when the needs of National Defense impose restrictions and create delays in material supplies, we share with all of you the consoling thought that this must be — and the cause is just. ¶ All things are relative, and the abilities and facilities — which in normal times gave Nashua leadership in the packaging material field — continue to maintain our position in that field. With the necessity of material substitutions, with possible limitations in variety of colors and effects, our skill is challenged to make, out of whatever may be available, the best possible wrapper or box covering paper. ¶ We continue our advertising and service contacts because the business of making friends should go on in all times and under all conditions. We know that war conditions are transitory — that many containers or wrappings must put on the "uniform of service" *now* to emerge *later* to meet post-war competition more attractive than ever. ¶ For *now* — and *then* — we solicit the opportunity of working with you, your package stylist, or your box manufacturer.

We produce . . .

BOX COVERING PAPERS in combinations and effects too numerous to describe.

WAXED PAPERS for bread, confectionery, food products, and other purposes—printed in effective designs and colors.

TAPE MOISTENING MACHINES AND TAPE for stores, factories and shipping rooms.

PRINTED CELLOPHANE for an unlimited variety of products, printed by several processes in sales-building, colorful brilliancy.

GUMMED PAPER, Flat Label Paper, Box Stay, Corrugators' Tape and other specialties.

OTHER ITEMS, Cake Bands, Greaseproof inserts, and paper specialties for laundries.

NASHUA GUMMED and COATED PAPER COMPANY

DEPT. M1, NASHUA, NEW HAMPSHIRE

CREATORS • CHEMISTS • CRAFTSMEN

NASHUA

MAKES PAPER MAKE MONEY FOR YOU

MODERN PACKAGING
JANUARY 1942 VOLUME 15 NUMBER 5

PRESS ASSOCIATION, INC.

Materials for war come first

When World War II started in 1939 it was inconceivable that any appreciable shortage of basic materials for industrial purposes could happen here. There might be a few exceptions, it was believed, but substitutes would soon be found for them. Technological advances of the past two decades were such that engineers and chemists could solve promptly any problem with the wave of a magic test tube. Some individuals still believed this until the first bombs dropped on Pearl Harbor.

Now they know it's sink or swim—that every effort, every scrap of available material must be mustered into active service if free peoples are to survive.

Shortages of almost every basic raw material which go into package manufacture will be painful. Yet things will have to be packaged. The men who fight must be fed and clothed, supplied with arms and ships and tanks and bombers —all of which must be sent, in whole or part, in cans, in boxes, in crates, in drums. On the home front, people still have to eat, wear clothes, use soap, toothpaste, drugs and transport all manner of necessities in cans, in boxes, in crates, in drums. The basic materials to transport this vast amount of goods must be obtained somewhere.

Just so much of this natural material is available. It must be used judiciously. It is vital for every person who uses such materials to understand the nature, origin, severity and probable duration of the shortage as it affects various critical items. With this in view, Modern Packaging presents on the following pages a table, showing the materials used in packaging, what they are used for in defense, the possible duration of the shortage and possible substitutes.

The recent fallacy of the "business as usual" attitude was not based on an over-estimate of this country's industrial capacity, but rather on an under-estimate of the overwhelming magnitude of the demands of total war with respect to material. This war is a war of production on an unprecedented and almost unimaginable scale.

The basic nature of the shortages has destroyed all hope of discovery of adequate substitutes. When serious shortages of basic commodities, existing plant capacity, building material and equipment forbid any expansion save in the basic military industries, the search for substitutes merely leads one out of the frying pan and into the fire. Nevertheless, the search will continue—a tireless search for available natural materials, requiring little or no processing. In the meantime, every person in business must be on the alert to change processes and specifications at a moment's notice, to make the most of the materials on hand and to utilize any substitutes that will lead to victory.

PRESENT-DAY SHORTAGES OF BASIC PACKAGING MATERIALS

Material	Packaging Use	Conflicting Military Use	Present Supply
PAPER & PULP(1)			
Box Board	Folding boxes, set-up boxes, window & floor displays	Packaging of military material	Distinctly limited
Kraft or Coarse Paper	Bags, fibre containers, cans, shipping cases, drums, wrapping paper, corrugated	Packaging of military material	Distinctly limited
Book Papers (2)	Labels, set-up boxes (wraps), box wraps, decorative & fancy papers, window & floor displays	Military printed matter of all kinds	Good
Paper Specialties (see also coatings)	Glassines and others	Varied	Varied depending on other papers produced by the mill
PIGMENTS			
Chrome	Inks, coatings, fancy papers	Chromium for armor, stainless steel and other steel use	Distinctly limited
Titanium	Inks, coatings, fancy papers	Military paints, welding rods, smoke screens	Distinctly limited
Zinc	Inks, coatings, fancy papers	Rubber compounding, die casting metal, and other metal uses	Distinctly limited
Organic	Inks, coatings, fancy papers	Explosives, use of equipment for defense chemicals	Fair
Black	Inks, coatings, fancy papers	None	Excellent
Vehicles for Pigments			
a) Linseed & Petroleum derivatives	Inks, coatings, fancy papers	Limited	Good
b) Tung & perilla (imported)	Inks, coatings, fancy papers	Limited	Poor
c) Synthetic	Inks, coatings, fancy papers	Military coatings & munitions	Poor
COATINGS			
Nitrocellulose	Overprint lacquers, fancy papers, artificial leather	Smokeless powder	Somewhat limited
Alkyd Resins	Metal decorating, bottle cap coating, metal container linings, inks, artificial leather	Military coating, phthalic anhydride as component of smokeless powder	Seriously limited
Phenol-aldehyde Resins	Metal decorating, bottle cap coating, inks	Military coating, phenol for explosives; formaldehyde for munitions and plastics; methanol equipment for nitrogen fixation	Seriously limited
Solvents	For use with above coatings	Military coating, smokeless powder manufacture, TNT manufacture	Distinctly limited
Plasticizers	For use with above coatings	Military coating, smokeless powder, plasticizers	Distinctly limited

(1) The subdivision of the Paper & Pulp group used here is that in common use by paper manufacturers.
(2) The designation "book" is used to include papers other than actually used in book printing and includes label stocks and other papers. It is calculated to distinguish from other bleached grades such as bonds, mimeos and tissues.

WHAT TO USE IN THE PLACE OF THEM FOR THE DURATION

Future Prospects	Restrictive Orders	Prospective Restrictions	Possible Substitutes
Poor, but apparently improving	L-15	Possibly to be expected	Conservation and grade simplification
Fair		Probably none of drastic nature	Conservation and simplification
Good	M-19 L-11	Because of good supply, future restrictions should not be serious. Brightness may be further limited	No substitutes needed
Varied	M-19 L-11	Dependent on many factors. Some restrictions to be expected	Other papers
Poor	M-18	War in the Pacific probably means much more stringent allocation from present stock piles	Organic yellows which are themselves limited in supply
Fair due to development of domestic ore and increasing plant capacity	M-44	Probably will increase, especially in near future	Lead whites
Poor	M-11 M-11-a M-11-b M-11-c M-11-d M-11-e	None	
Fair	M-19 M-25	Naphthalene, aniline, phenol, phthalic anhydride, beta-naphthol and perhaps others may all be restricted	Juggling from one color to another as shortages occur
Excellent, though transportation may affect cost	None	None	None required
Good	None	None	None required
Poor	None	None	Domestic drying oils
Poor	M-25 M-27 M-31	More severe	Domestic drying oils and natural resins
Fair	M-12	Smokeless powder needs and prospective nitric acid shortage may result in some restriction	No direct substitutes that are not as bad or worse. Natural gums may be used to a very limited extent
Poor		More severe restrictions will probably be imposed	Linseed oil varnishes with natural gums
Poor	M-25 M-27 M-31	More severe restrictions may be imposed	Linseed oil varnishes with natural gums
Poor though some indication of expanding production	M-34 M-30	Will vary with individual solvent	Solvent combinations may be varied depending on supply
Poor	M-16	Probably additional restrictions on phthalate type	Use of somewhat inferior coatings, blown castor oil and other generally considered less desirable plasticizers

(Table continued on page 30)

Material	Packaging Use	Conflicting Military Use	Present Supply
PLASTICS			
Transparent Wraps a) Cellulose	Multitude of packaging uses	Raw materials useful for munitions	Limited. Some uses forbidden for near future
b) Rubber derivatives	Multitude of uses, especially protective	Wide application of basic rubber material	Extremely uncertain due to Pacific situation
Rigid Sheeting	Multitude of uses	Raw materials useful for munitions	Limited. Some uses forbidden for near future
Molded Resins	Complete packages formed from molding resins, bottle closures	See nitrocellulose alkyds and phenolaldehyde resins under coatings, also tools and machinery for molding equipment	Distinctly limited
METALS			
Black Iron Sheeting	Tin cans, metal closures	All defense uses of iron and steel. Packaging of food for troops	Good
Tin	Tin cans, collapsible tubes	Limited supply of imported strategic material. Solder, bearings, food containers	Fair
Aluminum	Collapsible tubes, bottle closures, foil wraps	Aircraft	Very strictly limited
Tin-lead Alloys	Foils, collapsible tubes	. . . . .	Barred for many uses after March 1, 1942
ADHESIVES			
Vegetable	Package closures, tight wrap, paper coatings, labels	Military packages	Easy
Animal Glues	Package closures, tight wrap, labels, laminations	Abrasives, military packages	Limited
Casein	Paper coatings, laminations	. . . . .	Limited
Synthetic	Special closures, laminations, difficult adhesion problems	See Coating & Plastics	Seriously limited
Silicate	Corrugated	Military packages	Easy
Heat Seal	Labels, special closures	See Coating & Plastics	Some ingredients limited
GLASS	Bottles & jars	None direct but shortage of other materials has imposed a severe burden	Good
WOOD	Container & Export shipping cases	None	Good
ARTIFICIAL LEATHER	Fancy package covering	See Coatings	See Coatings

Future Prospects	Restrictive Orders	Prospective Restrictions	Possible Substitutes
For cases where protection of useful commodities is furnished—good, otherwise poor	M-12 L-20	Confused. Moisture-proof wraps considered as necessities in some fields	For decorative purposes—gloss inks and overprint lacquers and varnishes on paper base. For protective purposes none needed
Confused until rubber situation is clarified	Pending	Pending	Protective papers
Poor	M-12	Probably will be almost eliminated. (Order pending at press time)	Paper board—light wood
Poor except where necessary to protect fragile contents useful for defense	M-25 M-27 M-31	May expect complete elimination except in necessary cases	Paper board—light wood. Metal closures
Fair	None direct. All iron and steel orders are related	War in Pacific may call for limitation in amount of tin used for coating. Mill capacity for black iron itself limited	Glass, though this material is by no means unlimited in supply
Poor	L-25 M-43	Severe restrictions may be expected	Glass containers
Poor	M-1 M-1-a M-1-b M-1-c	More severe restrictions expected	Tin, other metals, transparent wraps, moisture-proof coated papers, none of which is in good position
Fair	L-25 M-38 M-38-a M-38-b		Tin, transparent wraps, moisture-proof coated paper, none of which is in good position
Good		None in sight	None needed
Fair		None in sight	Vegetable adhesives
Fair		None in sight	Corn or soya proteins, starches
Poor	M-12 M-25 M-27	In some cases may be completely limited. Other serious restrictions expected	Animal glues, vegetable adhesives
Good		None in sight	None needed
Fair		Additional restrictions expected on any resinous ingredients	Animal glues, vegetable adhesives
Good. Limited facilities may result in temporary shortages		None in prospect	. . . . .
Good. Use of wood may be restricted by limitations in machinery and skilled help		None in prospect. Laminated types may suffer from adhesives shortage	. . . . .
See Coatings		See Coatings	Embossed or other fancy paper

Cooking Sauces

Rum, sherry and brandy cooking sauces, products of Sprague, Warner & Co., come together in a round, transparent gift box with a bottom of metal. This particularly sturdy base is necessary to hold the heavy bottles. All the sauce bottles are the same size (6 oz.) and shape. Series of ridges, arranged horizontally and vertically, make a simple but effective pattern for the molded glass containers. No labels are affixed to the glass itself, but green paper ribbons are tied around the necks of the bottles and to the ends of these are pasted the tag-like labels. One side of the label has an illustration in black and yellow of a woman canning in an old-fashioned kitchen. The reverse side has product identification, a listing of the various ingredients, how the sauce may be used, quantity and the maker's name and address.

Since the housewife uses only small quantities of cooking sauces at a time in her recipes, she finds durable containers such as these especially suitable. They keep the sauces fresh and with full flavor strength until all the sauces have been completely used.

A black plastic closure screws on to a long neck which makes for easy pouring and measuring. A ridge at the base of the neck prevents the liquid from dripping down over the bottle. This keeps the container clean after usage.

After the bottles are removed, the transparent box makes a handy re-use container for a variety of purposes.

Credit: Bottles by Carr-Lowrey Glass Co. Caps by Owens-Illinois Glass Co. Transparent box by Central States Paper & Bag Co.

Design Histories

New Tea Package

The photograph shows both the old and the new package for White Rose Tea. All packaging of the tea in the wraps formerly used by Seeman Bros., Inc., was done at the source of supply. Now the company in its own modern plant does its own packaging. This method makes possible a closer control over the entire processing, considered necessary in these times, the company states.

Heavy lead foil was used for the old package and the whole was secured by a printed paper strip around the sides and ends of the inner foil wrapping. The new packaging offers triple protection to flavor and freshness of the tea. On the outside is a moisture-resisting, sealed carton and on the inside is a light-weight foil. Between the foil and the tea is a paper liner sealed so that the package is dust-proof, moisture-proof and odor-proof.

The company explains that it has planned three steps in regard to the inner liner in view of possible shortages of materials. The first step was the use of an aluminum foil, then came a lead and paper liner. Finally, an inner liner of laminated glassine, which resists moisture-vapor transmission, is planned for the use in the very near future.

The new, convenient, pantry package remains fully sealed until the end label is broken and the inner lining is opened. Once opened, the top may be tucked neatly back in place, ready for the next time. Thus, the full strength and aroma of the tea are retained until all the tea has been used.

The end label must be severed before the tuck-in flap may be raised. Thus, the label assures the housewife that there has been no tampering. The consumer's attention is called to this feature by the line, "This seal is your protection."

An outside lamination of highly finished paper gives the carton a clean, glossy surface that is resistant to dust and finger marks. The color scheme is similar to most of the old packages and the distinctive lettering of "White Rose Tea" across the front has been retained.

Credit: Design by Egmont Arens. Carton by Atlantic Carton Corp. Lamination by The Champion Paper Fibre Co. End label by The U. S. Printing & Lithograph Co. Liners by The Johnston Tin Foil & Metal Co.

Press to Open

Squibb's line of dry drug products are now packed in durable and easy-to-open containers. Consumer convenience was the factor which influenced the company in making a change in its older type containers.

Tins for drugs that come in tablet or powder form frequently have covers that fit so tightly that they are difficult to remove. There is no way to get a grip on the small lid to pull it off. When the lid is finally forced off, tablets or powder are often scattered over the floor. Consumers are, therefore, inclined to turn to the product whose packaging makes for convenience and ease of use.

E. R. Squibb & Sons, with their new tins, have arrived at a solution to these consumer use problems. The tins in which they pack their dry products have a clever arrangement based upon the fulcrum principle. The lids have slight indentations at the sides and when finger pressure is applied to any one of the corners of the tin, the lid rises slightly at the corner opposite the pressure. This enables the user to raise the lid without danger of spilling the contents by forcing the lid open.

The thin, flat containers for aspirin tablets and magnesia wafers differ from the larger ones for sodium bicarbonate, epsom salts and the like in that the former are hinged at the back. Arrows along the top front edge direct the consumer to pinch either corner to open. Directions for opening the larger tins are printed on the top label which seals the package and affords added protection. The label must be cut in order to reach contents and thus it prevents tampering.

All printing is done directly on the metal container and the only paper used on the outside is that for the top sealing label. Brand identification, product information and dosage are on the sides and lids of the tins. The loose drugs are enclosed in white paper bags within the tins, but the tablets are sufficiently protected by the tins without further wrapping.

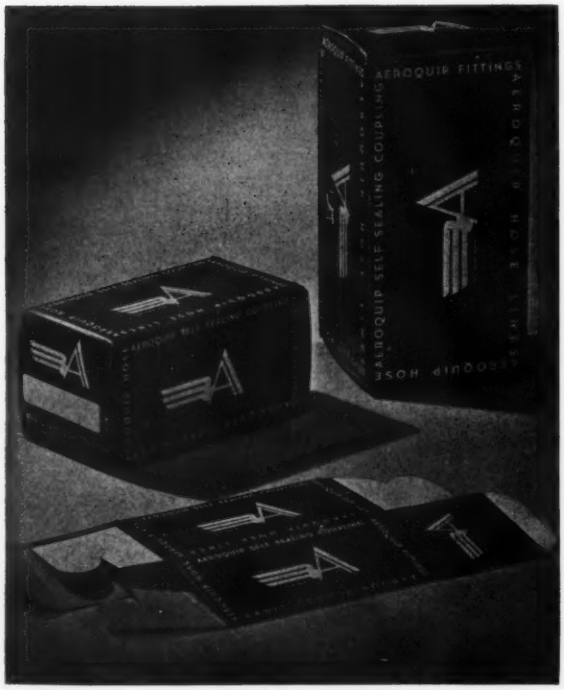
Credit: Containers by Owens-Illinois Can Co.

Design Histories

Cartons for Fittings

Convenience, protection and merchandising function are the three reasons given by the Aeroquip Corp. for new cartons to house their self-sealing couplings and hose fittings for airplanes. The use of cartons for the packaging of small airplane parts is a new method in the aviation industry where the customary practice has been to ship the products without individual packaging. Couplings and hose fittings are precision products sold at relatively high prices and the corporation felt it a thoroughly justifiable practice to use a number of standard-size cartons which would protect the fittings and at the same time afford convenience in identifying the product, in handling and in merchandising. The cartons are in clear red with white lettering. All four sides carry the same copy. Product and brand identification are lettered around the edges of each panel and the corporation's trade mark of an "A" with a conventionalized wing is in the center. This trade mark is repeated on both the top and the bottom of the carton. On the top is a white space reserved for stamping in whatever further information is necessary when the package is shipped to the customer. Repetition of the same copy on the four sides assures identification at a glance no matter how the packages are arranged on shelves or when stored.

They are standard reverse tuck cartons with locks which prevent heavy contents from breaking through.



Credit: Made by Sutherland Paper Co.

Toiletries the way men like them

Nelson, Baker and Co.'s Colonial Club line of men's toiletries has been on the market in United States and Canadian drug stores for many years. For about twenty years, the line has appeared in the same packages. They were good packages and thoroughly in step with the times when they were placed on the market, but they were packages which left room for improvement according to modern merchandising standards. Wilbur H. Gutow and Warren S. Tarbell of Nelson, Baker were aware of shortcomings in their packages and they decided upon a change of dress for Colonial Club. Accordingly, they assembled the numerous items in the line and concluded that package re-design should start with the wet goods—lilac lotion, bay rum, hair tonic, shaving lotion, hair oil—and that the other packages should tie in with these bottles from a standpoint of design. They also laid down a number of basic conditions which had to be considered in the making of the actual designs. These conditions were based upon the essential needs of both the consumer and the company.

It was first of all essential that the long-established identity of the Colonial Club name be retained. Further, the designer had to remember that the new packages would have to tie in with the company's wide assortment of other items, long marketed under the trade name, Penslar, through specially authorized drug stores. It was also important that the designer bear in mind that the Colonial Club line was a medium-price one. The items were not in the luxury class, nor were they in the lowest-price retail bracket. Within these few limitations, the designs had to be created.

The designers began with several questions about toiletries for men. What qualities did men look for in such packages? They demanded smart appearance, of course, but that appearance had to be masculine—no frou-frou. Convenience? Yes, by all means. Packages would have to be easy to handle with wet, often slippery, fingers; bottles would have to be easy to open and close; bottles must fit the medicine cabinet shelf; bottles must dispense their contents in the right quantities every time. All these considerations represented consumer's needs.

On the other hand, the company's needs had to be taken care of as well. Nelson, Baker had to have packages that could be merchandised effectively, packages that would be suitable for store display and stand out on the druggists' shelves. Containers had to be economical to fill and pack but at the same time strong enough to withstand the usual rigors of shipping. The company naturally insisted on capacities that would keep the line within predetermined cost limits. Containers had to have closures of dependable sealing quality. There must be no danger of leakage.

With all this information assembled, the designers went to work. They drafted a series of designs for containers incorporating the principles laid down by the company and created around specified limitations. Finally, a model of solid plastic material was made. Drawings, no matter how fine or detailed, cannot give the complete impression of a package. Nelson, Baker wanted to be sure their package would be right. The model submitted to them and illustrated in this article is fundamentally the same as the finished package. Only a few corrections had to be made in the model. Even though this was true, the method of following through a design plan and observing all the painstaking elements that go into the establishing of a good package proved worth while.

The resulting packages, Nelson, Baker feel, fulfill the requirements demanded of them and even exceed expectations as far as first sales indications are conce ned. A glance at the old and new packages shows immediately how the Colonial Club identity was retained. They also tie in well with the Penslar items manufactured by the same firm. The containers have a quality look, but not one of forbid-

1

2

dingly expensive luxury. They are gauged right for their particular price class.

These new bottles please the masculine user. Their long necks offer slippery hands a sure grip with a firm feel to it. The white caps are a cinch to remove and replace. The bottles will fit practically any medicine cabinet and they are equipped with dispensers that work right every time. As a finishing touch to complete the harmony of the design, they are sealed with bands which hold the caps securely in place, guard against evaporation or leakage and impress upon the user's mind the Colonial Club trade mark.

As a point-of-sale promotion, Nelson, Baker and Co. worked up display units to help the druggist sell the line in larger quantities than previously sold. The step-up window-piece illustrates a fine old Colonial doorway and the onlooker has the feeling of looking through the doorway upon a comfortable fireside group. The complete line arranged with each item on a separate level fits in with the general treatment and gives the appearance of being placed on the steps of the doorway to the house.

Another display idea carried out with individual packages is that illustrated with bottles of lotion and hair oil. These are designed for shelf or counter use. The platform supports a bottle or jar and beside it is a small cardboard Colonial house in full color. The unique, dramatic expression of such a display impresses the customer at first glance and the association of the products with the words, "Colonial Club," acts as a long-time reminder for the complete line of goods.

Though toiletries for men are by no means new, say Nelson, Baker, they've recently become more popular. The company finds that its own sales have reached a new high. These gains are attributed in large part to repackaging its men's toiletries in line with modern trends and to complementing the packages with eye-catching window displays and counter dispensers. To good packaging and smart merchandising, the company feels, must go the major credit for causing this wave of popularity in these men's toilet goods.

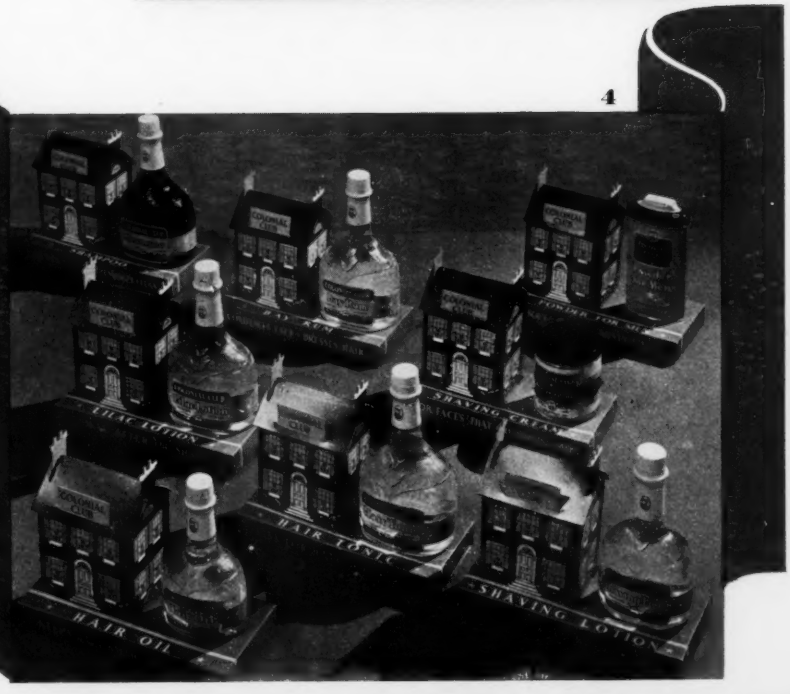
Credit: Bottles, caps and sealing bands by Armstrong Cork Co.

5

1. Old bottles used by Nelson, Baker and Co. This line of packages was used by the company for 20 years without redesigning. 2. The new containers for the complete line of wet goods. Particularly noticeable is the way in which the identity of the "Colonial Club" name was retained. Contrast the squat, non-tilt new bottles with the tall, small base old style ones. 3. The plastic model upon which the finished packages were based. 4. A display dispenser whose attractive cardboard Colonial house effectively points up the brand name. 5. A typical window display with colored poster and individual levels for the products.

3

4



Packaging

1

2

3

1. Milk as an artistic design theme has been carried out by Milkmaid, Inc., for its cosmetic line. Milk glass was selected as the most suitable container decorated with tiny nosegays directly on the glass. The latest rural touch was the combination unit of these packages in an old-fashioned wooden bucket. Design by Josephine von Miklos. Containers by Hazel-Atlas Glass Co. Closures by Armstrong Cork Co. and Victor Metal Products Corp.

2. Myles Salt Co., Ltd., has developed this six side, "panel-pak" container for its evaporated salt. Unusual shape and design of the package allow for a wide variety of display ideas. Not only is it easy for the housewife to handle, but it is sift-proof and has a convenient pouring spout. An up-turned salt cellar with the slogan, "It runs for Myles," makes a decorative motif for each of the panels. Made by Container Corp. of America.

3. A new stocking color was developed by Sapphire Hosiery Co. which resembled the color of cork in a cork-tipped cigarette. The color is called "Cork Tip." To carry out the cigarette idea, a stocking wrapper is used which simulates a huge cork-tipped cigarette. Wrappers are of blue-white paper with antique finish printed in cork color and sapphire-blue. Three pairs of stockings fit into a set-up paper box. Wrappers by Leebo Printing Co.

4. New French perfumes—all in packages of American manufacture—have been introduced by Herba, Inc., distributors for La Maison Carnaud. Among them is this attractively shaped cologne bottle, delicately decorated with a decalcomania label around the shoulder. The vials, flat-pinch and urn shape, are made of hand-blown glass, plated with 24-carat gold. Bottle by Imperial Glass Corp. Decalcomania by Palm Fechteler & Co. Vials by Glass Industries. Box by H. Fleisig, Inc.

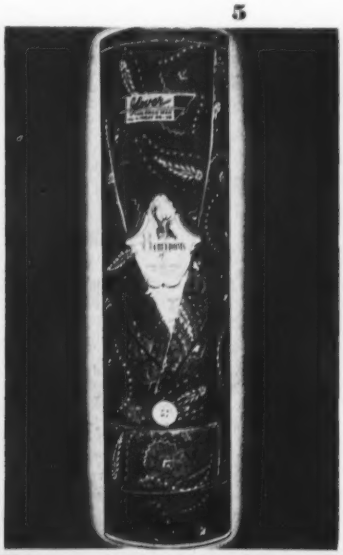
5. Cleverly packaged for both gift and counter eye-appeal are pajamas made by the Glover Co., now being marketed in a tubular container of rigid transparent plastic sheeting. Approximately 200 per cent is saved in counter space over that formerly occupied by the old package, the company states. Label sizes appear on the pajamas and may be seen at the upper end of the tube, making it unnecessary to mark the package in any way. Made by Central States Paper & Bag Co.

6. Mexican craftsmen in California make these containers which look like hollow tree trunks. Evans Honey Co. puts up its "Bee Tree" orange blossom honey in them. Molded paper pulp, ridged and dyed to simulate bark, is applied to stock glass jars. Contents may be seen through the hole-like window in the side of the container. Metal screw-on caps are used for closures. The top of the smaller jar is of wood with brand name stamped on it. Top of the larger one has brand name on the metal closure.

(*Page 36*)

4

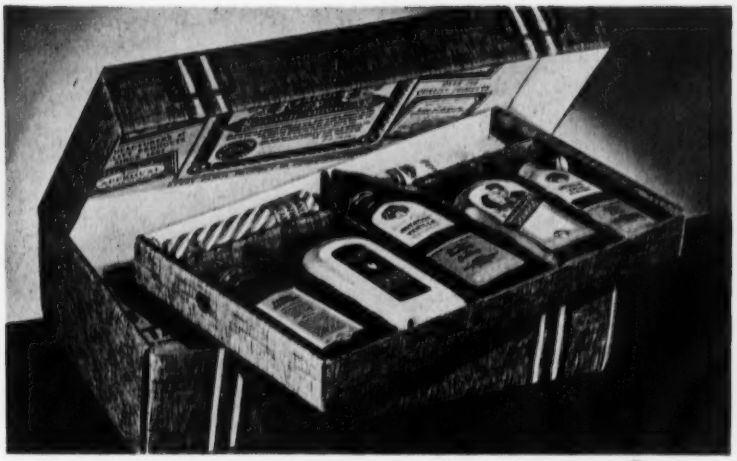
5



6

Pageant

7



8

7. Lucien Lelong's Balalaika perfume is presented in a distinctive, heavy flacon, high-lighted with swirling gold lines, which continue around the large glass stopper. The set-up box has a base with a platform die-cut to hold the flacon securely. The extension edge is trimmed with gold paper. The top of the box is covered with an oyster-white paper, printed with fanciful trees in green, gold and other colors. Gaily colored peasant figures of real yarn dance hand in hand around the outside. The boy and girl figures are made by hand of yarn in blues, greens, yellows, reds. Brand and product names are scattered about the cover to enhance further the swirling effect.

8. A practical and convenient salesman's sample case is used by The Zanol Products Co. for its line of cosmetics, packaged foods and other items. The case is made of a light-weight corrugated board. The outside has printing directly on the board in such a way that the case resembles a fabric-covered, airplane type piece of luggage with the familiar red and white stripes at each end. An inner tray is also printed to resemble fabric and has separate compartments for each item. Thumbholes at either end of the tray make it easy to remove. The cover is hinged and on the inside is printed the company's guarantee of its products. Sample case by The Hinde & Dauch Paper Co.

9. A box for gift or party givers is Jane Amherst's Mountain Meadows package, containing half a dozen $5^1/_2$-oz. jars of preserves made from Oregon wild fruits. The corrugated box does double duty as shipping container and display piece. Tiny pine cones, placed between the jars, are extremely decorative and also help to make a snug package. The landscape which appears on the cover is reproduced by the photo-effect method. The glass jars have metal closures. Boxes by Fibreboard Corp.

10. Pal Blade Co. has these new Service Pack sleeves in red, white and blue which are designed for men in the army and navy. These sleeves fit over the regular packages of 25 and 50 blades and they are available for both the packages containing double edge and single edge blades. There is no extra charge to the trade for these patriotic sleeves. On top of the sleeve is a bias strip with illustrations of three men's heads, with army hat, navy cap and airman's cap and visor.

11. Cowboy, Inc., in putting out its beverage in these bottles, colorfully decorated with cowboys, broncos and covered wagons, wanted to reduce as much as possible bottle loss due to confusion when empties were picked up. The company chose these straight-side bottles because they provided large areas for distinctive decoration. A low center of gravity gives the container stability on the production line. Bottles by Owens-Illinois Glass Co. Caps by W. H. Hutchinson & Sons.

(*Page 37*)

9

10

11

ROUND TWO COMING UP

★ ★

Current digest of significant developments in the emergency situation as it affects packaging, summarized from government sources, reports from material suppliers and package users.

As we enter the war in the role of active participants, instead of "handlers" in the seconds' corner, it is evident that OPM's preparations were not based on alarmist predictions. On the contrary, shortages were very real; people who were skeptical are now convinced; unity has come with amazing suddenness and completeness. The blueprint stage is over; test runs finished; machine is in operation; we're on our way.

President Roosevelt reported that more than two and a quarter billion pounds of foodstuffs were shipped during the eleven months of 1941 in the lease-lend program, packaged for protection and presentation as never previously. Materials and methods of packaging have grown and developed to adapt themselves to the changed methods of conducting warfare.

Users of packaging materials may definitely look for (1) increased tightening of materials controls, (2) price regulation measure and (3) increased emphasis on simplification and conservation.

Cellophane order (L-20)

Product of what one OPM man calls "uncontrolled zeal," the Cellophane Order still needs clarification. Considerable confusion existed in its early stages as to what section of OPM would administer this order, but it now appears to be in the hands of A. E. Peterson, Plastics Section of the Chemicals Priorities Branch. Inquiry was directed to OPM, asking if intent was to confiscate supplies of cellophane remaining unused at the effective date of the order, January 8. The answer was that users of the material might avail themselves of the "Appeal Clause" in Priorities Regulation No. 1, which reads as follows: "Any Person affected by any Regulation or Order of the Director of Priorities who considers that compliance therewith would work an exceptional and unreasonable hardship upon him, may appeal to the Division of Priorities by addressing a letter to the Division of Priorities, Office of Production Management, Social Security Building, Washington, D. C., setting forth the pertinent facts and the reasons such Person considers that he is entitled to relief. The Director of Priorities may thereupon take such action as he deems appropriate."

Lead and tin foil order (L-25)

Four days after issuance, L-25 was suspended for 30 days. Original order prohibited the manufacture and sale of these materials after January 15 and prohibited their use after March 15. Purpose of this study is to investigate all the facts leading to the issuance of the Order. Odds are against modification or cancellation of this regulation.

Rigid transparent plastic sheeting

Predictions are that next packaging material to be affected by a control order will be rigid transparent plastic sheeting. Group meetings of users of these materials have been conducted both in Chicago and New York. At these meetings, OPM officials were present to discuss and answer questions regarding classifications of uses on which priorities would be based.

Container manufacturers using these materials, prior to the larger meetings, met to discuss problems peculiar to their particular needs. A committee was selected to compile statistical information about their industry and present it to OPM. At the December 10 meeting with OPM officials in New York, H. Velkoff of the Central States Paper & Bag Co., as spokesman for this group, presented the following resolution. "We are speaking primarily as package fabricators. One of our materials is rigid plastic sheeting. In the distribution of that material we recognize defense needs as primary. Since packaging represents an important essential function, we urge that our situation and requirements be given full consideration by the government. We believe this means a separate and specific recognition of functional packaging in the classification." Probability is that the order will be issued shortly after the first of the year.

Paper and pulp

Easiest of basic packaging materials to feel effects of increased production and particularly conservation measures, paper and pulp still remain off the Critical List. Supply situation appears to be easing up.

Chlorine consumption has been further decreased in the manufacture of pulp, paper and paperboard by OPM's Limitation Order L-11. Effect will be less whiteness in practically all grades of paper.

Restrictions on copper manufacture, originally effective January 1, have been deferred until March 31 applicable to certain specific products listed in OPM's Order PM-1718 modifying conservation order M-9-C. On this list is the specific item, "boxes, cans, jars and other containers" as temporarily exempted.

Research laboratories have been given further assistance by issuance of order assigning A-5 rating for benefit of manufacturers of necessary laboratory chemicals and equipment. This rating is also applicable to material required for packaging this equipment.

OPM (Container Branch) announces that Preference Rating Order P-22 may not be used to obtain packaging material.

Price controls

Prices on domestic wood pulp have been fixed at present levels for the first quarter of 1942 by agreement between OPA and individual pulp producers. Grades affected by these agreements are bleached southern (*Continued on page 100*)

1941 Preparedness for the Emergencies of 1942

In the face of a major emergency, packaging accomplishments go right on, all the more noteworthy because of difficulties engendered by shortages of basic packaging materials.

The year 1941 saw much more than routine packaging activity. It saw ingenious adaptations to shortage conditions, cheerful cooperation in simplification and conservation and it saw numerous instances of actual defense activity. All told, the packaging field has given an account of itself that reflects highest credit.

In a review like this one, it would be utterly impossible to present a picture anywhere near complete, but from a great wealth of case histories those that follow can be regarded as fairly representative of what 1941 has brought forth. Multiplied a thousand-fold—as they could be if all were told—these achievements would reveal impressively the ingenuity and patriotism of a segment of American business which for the most part cannot participate directly in defense activities.

Packaging is doing its full share to keep things moving, not only armies, but civilian supplies. This is the impressive story of the year 1941.

Credits: We can't begin to give adequate credit to all those who, as producers or users of packaging material, have made this article possible. Therefore, much as we could wish to do so, we make no effort to follow our customary procedure of mentioning by name all producers of labels, cartons, containers, etc. Instead with all our might we give a rousing cheer for the entire packaging industry.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Conservation Measures

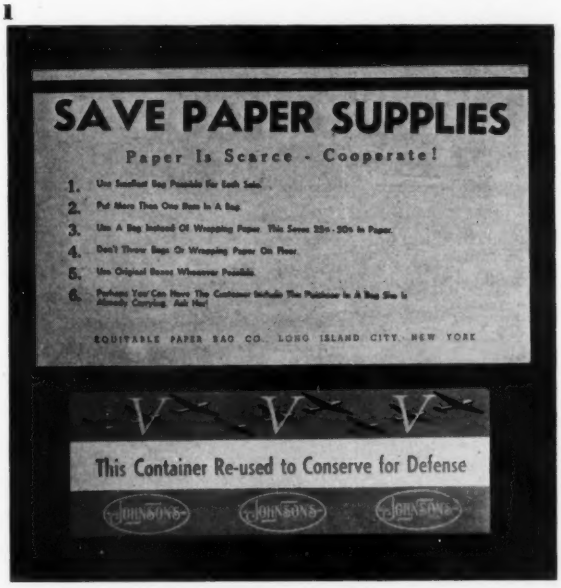
Suppliers of materials have "gone into reverse." Instead of openly or tacitly encouraging profligate use of their products, they are heroically preaching—and practicing!—conservation. Cheerfully realizing that habits of thrift which they advocate today may easily hold over the spell of poor business when the emergency is over, suppliers are boldly issuing bulletins advising economy. Equitable Paper Bag Co., for instance, distributes posters to help dealers educate clerks how to "save paper supplies" and is publishing letters of suggestion from dealers in its periodical bulletins. (*No. 1*) Another supplier "makes a virtue of necessity" by means of a victory label, patriotically colored, calling attention to the fact that containers are being re-used for conservation.

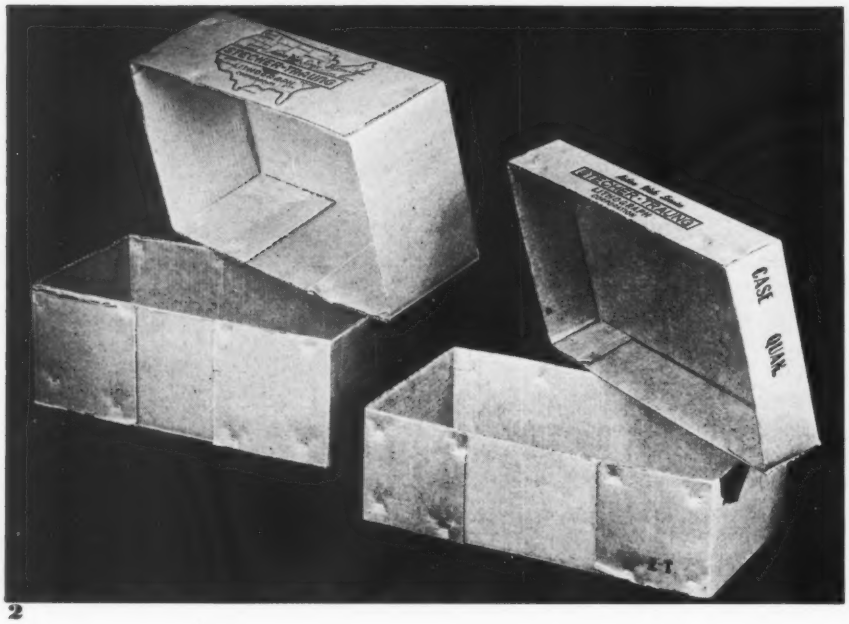
Many conservation measures are not dramatic, nor can justice be done to them pictorially. For instance, Robert Gair's director of creative design, Lane Marohn, explains:

"In our industry, in deference to government objectives and needs, we have surveyed our carton output, with a view to cutting down the weight of boxboard and its amount surface-wise, going into a specific run of cartons. In this way, where previously it may have been felt necessary to supply a weight of board technically described as .022, this has been converted perhaps to .020 without affecting essential sturdiness or protection. At the same time, it may have been possible to cut down the length of the top and bottom flaps or the length of the tuck. Such revisions in structure sometimes result not only in the obvious saving, but also provide at the same time a better interlock in the layout, so that, in further economy, a greater number of cartons may be yielded by a given trim of boxboard."

Ferdinard Gutmann & Co., makers of closures, tell how "early in the year we started to urge those of our customers who used double shell caps to change to single shell caps and on the day on which steel products were put on a priority basis, we decided not to manufacture any more double shell caps. This latter type of cap requires on an average $2^1/_8$ times the amount of metal that the single shell cap requires. While it is unquestionably far more attractive, the single shell cap will seal the product every bit as well. With the supply of metal curtailed and the necessity for saving everything that is not essential, why not use the single shell cap in place

1





2

3

of the double shell cap? We have had splendid and patriotic cooperation from practically all our customers. They have willingly changed to the single shell cap even though their package thereby has become less attractive and perhaps lost some of its sales appeal."

"These days the supplier's salesmen must be sales engineers," Iowa Fibre Box Co. finds. "They must work with their customers as closely as possible, devising new ways to cut down square footage of board. Chief ways are:

"1. Changing inner packing to do the same job with less square footage.

"2. Change the packing by shipping more of their product in one container of a larger size, thereby reducing the square footage per unit.

"3. Re-designing boxes so that the square footage required is less than that formerly used.

"4. Paying particular attention to the article that is to be shipped and to see that a heavier box is not used than is necessary. Many times we have found manufacturers who have used substitutes in manufacturing their product which can be re-classified and shipped in a lighter package.

"5. Changes in Rule 41 have helped considerably in playing a part in additional savings and our sales engineers are calling Rule 41 to the attention of their customers and working with their shipping departments to the extent that we have lessened materially the square footage for a great many customers and have taken care of their problems adequately."

A Pacific Coast manufacturer of industrial chemicals is asking customers for its laundry bleach to use the material sparingly because of the chlorine shortage. Using a red, white and blue label on containers to convey that message, they explain frankly that the product is reduced in strength and tell how to do the same volume of work with less bleach.

Suppliers are taking their own medicine, too. Hal W. Johnston of the Stecher-Traung Lithograph Corp. reports a program of conservation which produced three definite results with respect to their shipping containers for labels, seed packets and cartons: (*No. 2*)

1. A saving of 26 per cent in corrugated stock.

2. A simplification in sizes, reducing the number from 35 to 18 stock sizes of containers.

3. A more efficient inventory control through centralized planning and buying of shipping containers.

The 26 per cent saving in corrugated stock, as the illustration shows, was effected by reducing the overhang of the top part of their telescope type containers and by shortening the reinforcing laps. Subsequent experience has revealed no sacrifice of strength or efficiency.

Use of lightweight stocks is proving a fruitful method of pulp conservation. The experience of George H. Sweetnam, Inc., illustrates the point:

"We have cut down the basic weight of backing on our several paddings which we manufacture, conserving pulp for our various mills. Also in cutting our various special papers, we have used a much lighter weight protective paper.

"About a year ago we developed a new type of padding which in itself has cut down to a great extent the weight of the paper which we ordinarily use for this particular product and we find it will serve the purpose for our customers just as well and at a lower cost to them. Also we have recently used second-hand cartons for local shipments in order to spare new ones. Another thing we have done is to cut down the amount of gummed kraft tape used particularly on local shipments."

Trade associations are spreading the gospel of conservation among their members. The National Retail Dry Goods Assn. has issued a helpful report, "Conserving Wrapping Supplies Under National Defense." The Packaging Institute has collected from its members suggestions for possible reductions of material for set-up and folding boxes as used in packaging drugs, pharmaceuticals, proprietaries, chemicals and toilet preparations. Plan is to formulate a basis for recommendations to OPM's Paper Conservation Committee, to be embodied in "directives" issued by that body.

Systematic plan of Frosted Foods Sales Corp. resulted in definite savings of 1,038 tons according to their letter:

"As soon as we learned that defense demands were creating an acute condition in the paper industry, we began to take steps to reduce our 1942 packaging materials requirements.

We believed that voluntary cooperation with our government might obviate the necessity of priorities on packaging materials at a later date. And so we began to challenge our established packaging procedures all along the line to see where a change or an elimination would effect a saving.

"Perhaps our method of attacking the problem is obvious. Perhaps the five 'Fronts' upon which we advanced will have been thought of by all. However, in the hope that others may be helped to release packaging materials for defense purposes, I am going to tell you first the five ways we have discovered for saving materials and then set forth exactly what savings we have achieved:

"1. Re-designing of shipping cases to hold more products to the given square inch of packaging material.

"2. Changing size and shape of shipping cases to use less material and to eliminate interior packing.

"3. Cutting down on weight of board.

"4. Re-using of shipping containers.

"5. Eliminating certain outside wrappings from cartons.

"You will understand, of course, that not even one of these steps can be followed very far without occasioning some sacrifice or compromise. Certainly this has been true in our case and yet we believe that the final result—the freeing of tons of materials for national defense—is of paramount importance. Positive results obtained to date are as follows:

"1. 30 Per Cent Saving on Shipping Case Requirements. By re-designing our shipping cases and enlarging them to hold an additional quantity of product (correlated results of steps 1 and 2 above), we will show savings which total 30 per cent of our annual requirements.

"2. 26 Per Cent (Average) Saving on Product Cartons. For some time we have been ahead of the field in our own industry in regard to caliper of board used for retail cartons. As a further and substantial means of cooperating with our government, we agreed to reduce the caliper of board in our large size carton used for sale to the institutional trade, from .024 to .018, which means an annual savings of 25 per cent. We will reduce the caliper of board used in the other institutional cartons from .018 to .016 with a saving of 11 per cent. For packaging certain of our heavier products, we have reduced the board from .030 to .022 with resultant savings of 27 per cent on our year's requirements.

"3. 75 Tons Saved on Shipping Cases for Carton Blanks. Retail carton blanks were formerly shipped from carton suppliers to our production plants in their own especially designed shipping cases. We are eliminating these cases, which were formerly discarded after use, and substituting our newly designed product shipping case. These in turn will be re-used for the shipment of products. Thus we have been able to effect an appreciable saving.

"4. 167 Tons Saved Through Re-Use of Product Shipping Cases. We expect to re-use production cases at our warehouses for redistribution of products to retail stores. This saving as well as that listed in the paragraph above is the first result of our plan to make shipping cases do double duty and even triple duty whenever possible.

"5. 100 Tons Saved on Wax Paper. Recent tests indicate the possibility of eliminating the use of wax paper for wrapping the large size cartons. We shall, therefore, discontinue this policy of wrapping certain items in wax paper, which will effect, during 1942, the substantial saving indicated above.

"This is as far as we have gone at the present time, but we are still studying all of our packaging problems and hope to contribute even greater savings in the future. The total saving that we have effected to date is about 1,038 tons."

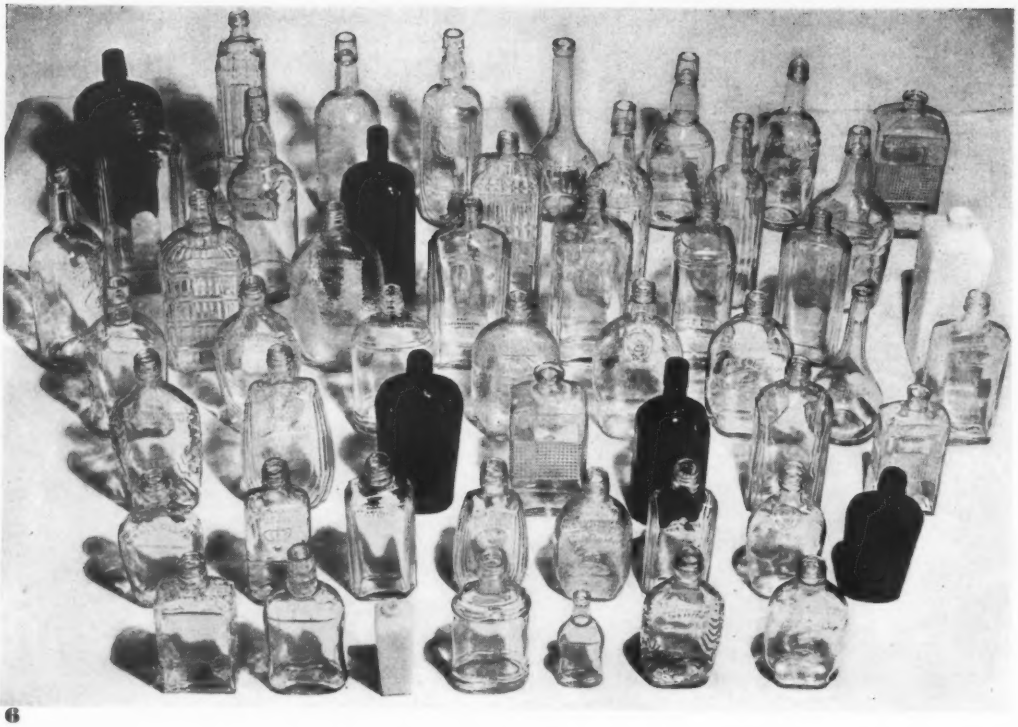
Shortages of packaging materials are only one set of problems faced by the manufacturer. Hoffman's garden products are a highly seasonal line, packaged in an ingenious "cut and pour re-seal" package. (*No. 3*) They write:

"We estimated our possible requirements of raw materials for 1942 and went into the market early in June. Due to scarcity of labor, we began building up our stock of finished goods weeks ahead of the time we normally begin. We also persuaded the buyers to estimate their possible requirements and to give us their orders for early spring shipment. We are glad to be able to report that they have cooperated splendidly."

4

5

10¢
VIRGINIA DARE
FOR FLAVORING AND COLORING
GRAVIES, SOUPS, STEWS, SAUCES, MEAT LOAF,
HAMBURGERS, SANDWICH SPREADS & CHEESE DISHES
ADD THE CHEF'S TOUCH
VIRGINIA DARE
BRAV-I-AID — HOT SAUCE — GARLIC SAUCE



6

7

Shortages, like lightning, strike anywhere. Mary Muffet, Inc., dress manufacturers, for the purpose of high-spotting their packages in the buyer's receiving room, formerly used a simple device. For one of their brands they put a yellow gummed label on a heavy black wrapping paper; for another brand they used a white gummed label on a bright wrapper. Normally this would be an inexpensive method of affording sales appeal and distinctiveness. But the shortage of wrapping paper forces discontinuance of the colored exterior wrap.

Eventually, it is quite possible that confectionery packages will experience considerable simplification and elimination of frills. The forward-looking Schrafft organization so far has made minor changes. "Most of the changes," they write, "have been on weights of board, kinds of board, changes in paper stock, elimination of certain types of dividers and trays, changes from gold printing to colored printing, requesting from our customers the return of corrugated shipping containers, so that they can be used the second time—all of which are slight divergences from our customary way of doing business and of importance at this time."

Conservation has hit the desert. The Valerie Jean Date Shop, which has relied on interesting packages to glorify its delicious dates, has taken steps to conserve corrugated packaging material by stressing repeated use. (*No. 4*) "We have set aside space for all used cartons and instead of allowing them to be thrown away we are storing them. It is surprising how they will pile up and the good use to which they can be put. Seventy-five per cent of them are as good as new and good for shipping purposes."

Good example of conservation of material by increasing the number of units packed is seen in Virginia Dare's new display container for their meat sauces. (*No. 5*) Holding two dozen bottles, this container not merely saves packaging material and is adapted to various combinations and assortments of flavor, but it also increases the unit of sale to the retailer. Their small cartons (*No. 7*) for food colors, too, are now constructed with economy in mind. Formerly these cartons were labeled as to color of the product. Now an open window reveals the color indication on the bottle label. Thus one carton serves for all the colors.

Simplification is in itself a conservation step. Outstanding example is reported by Schenley Distillers Corp.:

"The most significant thing we have done in packaging in 1941 was to reduce drastically the number of brands, bottles and labels of products which had only a limited geographic sale and to undertake a broad program of simplification and standardization of our present labels, bottle sizes and shapes —all for the purpose of aiding in the conservation of materials and labor needed for national defense. (*No. 6*)

"During the past year we discontinued 526 brands, types and proofs that were limited-sale items, resulting in the dropping of some 75 shapes and sizes of bottles like those shown and over 1,800 different kinds of labels. This action has freed molds, materials and labor needed for defense purposes."

Materials and Substitutes

Research is on its toes. Critical shortages are stimulating developments in new and substitute materials. The American Nickeloid Co. has brought out a copper plated steel which the company reports can be substituted for solid copper, as well as a chromium plated steel to replace stainless steel.

Container Corp. of America has a new thermoplastic coating material, which, with the machinery for applying it, was perfected during the current year. This promises to prove valuable as a protective material for retention of moisture and prevention of infestation.

Makers of adhesives have their problems, too. Williamson Adhesives, Inc., modestly said:

"We sometimes think that the most significant thing this company has done during the past year is to come somewhere near satisfying our customers with the conditions under which we were forced to operate. In recent months our energies have been taken up very much with the matter of using substitute materials and still be able to produce adhesives with the necessary end results our customers need."

Similar is the experience of The F. G. Findley Co.:

"What we have done is more or less intangible—changing of solvents in adhesives, substituting domestic products for imported raw materials, etc., which one cannot picture or photograph. They are the unseen things that keep the wheels moving. One of the most interesting developments is a glue extender which enables the consumer to add a vegetable glue to his animal glue and thus conserve the high-priced and very scarce animal glue. This 'Glue X-Tender' lends itself to types of application where a hot animal glue has been used, such as casket covering, paper box work, tube winding, etc."

More at length on the same subject is a letter from the Union Paste Co.:

"Our research the past 9 months has been devoted mostly to finding substitutes for standard materials we have been using. We have been very successful so far in making substitute formulations that seem to perform just as satisfactorily as many of the standard adhesive formulas we have furnished in the past.

"If we hadn't devoted a considerable amount of our research to finding substitutes for standard materials and also finding substitutes for the substitutes, we probably would have had our production reduced about 50 per cent as a total for the company and as much as 80 per cent on our specialty adhesives for transparent films and the like.

"In our specialty adhesives we have brought into play the use of resin emulsions to extend latex formulations as the government requires reduction in rubber consumption, which effects the adhesive field where latex is used as well as other fields where rubber is employed. In the non-aqueous or lacquer adhesives certain plasticizers and resins have been unavailable because of complete allocation to defense industry and uses.

"We have found new plasticizers which are being synthesized for us from certain types of oils of natural origin. These ideas of different plasticizers were developed in our own laboratories and have enabled us to maintain full production and take care of increased business. In some instances this research has developed new and improved formulas which we had not realized in years past."

Today's problems are tomorrow's triumphs. In the solution of their problems perhaps in the long run, the research being conducted in times of stress will prove to be an important contribution to national self-sufficiency.

Another excellent example of this principle is Robert Gair Co.'s report of an achievement by their Canadian company:

"This spring they received an urgent request from one of their customers for flame-proof paper to be used for wrapping shipments to Great Britain in an endeavor to prevent loss due to fires started by incendiary bombs. A flame-proof paper was something entirely new, but after much study and many experiments, a chemical solution was developed which would saturate a kraft paper and retard fire. Then they had to find out how to impregnate the paper with the solution, because merely coating the surface did not answer the purpose. A process was finally evolved whereby a flame-proof paper satisfactory to the customer was produced. When a match is applied to this paper, it merely chars and does not burst into flame, thereby offering an immense amount of protection to inflammable contents. Our subsidiary, Gair Co. Canada Ltd., is now producing this new product at the rate of 20 to 30 tons a month."

Although the synthetic thermoplastic material made by The B. F. Goodrich Co. has been placed under mandatory defense priority because of numerous military applications, it must be included in this review because an intensive research program extending its commercial use is still under way. Hundreds of commercial applications had been developed and were finding wide consumer acceptance at the time of the OPM order. The manufacturer tells us:

"Because the film can be made non-toxic, completely tasteless, odorless and glass-clear, it is expected to have wide application for wrapping and packaging foods and considerable test and service experience in this field has been gained in 1941.

"Dr. Howard E. Fritz (manager of the Goodrich Synthetic Division) reports that tests reveal that such items as meat, fish, fowl, sausage and cheese may be packaged in film because of its resistance to moisture, while its resistance to the diffusion of air and water make it suited for wrapping coffee and cigarettes and volatile or hygroscopic materials requiring air- and water-tight treatment."

The makers of fancy papers for box wraps have not been taking the emergency lying down. One of them, The Marvellum Co., wrote:

"We, of course, have had to find substitutes for white kraft and we have found certain strong sulphite sheets of paper which are pretty good substitutes. On some of our medium-priced papers, we have also gone to paper body stocks which contain certain percentages of ground wood in order to conserve sulphite papers. Since gold bronze is so scarce, we have substituted mica which is available in colors as well as with small percentages of gold bronze.

"Our most important new development, we believe, has been the substitute for paper backed with real foil. This is made by our own special process with argentine* used as a coating material. We make this line in silver, two shades of gold, red, dark blue and green. Right now this line takes up a good part of our increased production."

Users of fancy papers probably do not fully realize the dif-

* This term is derived from the latin word for silver, and has no connection with our South American neighbor, Argentina.

ficulties which these manufacturers face, hence the following information (from a paper-maker who prefers to have his name withheld) is given in detail:

"When our government started on the extensive armament program, one of the first metals they required for airplane manufacture was aluminum. At that time we had developed the sale of metal foil papers for box covering to a considerable extent. Our consumption was so large it gave us grave concern as to what we would do for a substitute if and when the aluminum supply should be stopped, inasmuch as this foil was made from aluminum rolled out into thin sheets.

"The nearest thing we had to it was a silver glazed paper. This we had made for years but we had never considered it a match for the silver foil. Our problem then was to develop our silver glaze by some means so that it would have the same or similar brilliance as the metal foil. Now the silver glaze is made from a powder called argentine, composed of lead and tin, which metals are still available although their supply also is threatened. This powder is mixed with casein and coated on to our papers by the regular coating method, then glazed.

"We found that by buying a special, heavy, pliable paper and using an extra heavy coating of this argentine, we could approximate the high finish of metal foil. This substitution has proved so far to be fairly successful in satisfying the trade. The fact that the new so-called substitute foil cannot possibly separate from the paper is one big advantage, as we have no end of trouble with the regular metal foil separating from the paper back. It seems that in making the regular metal foil, it is difficult to take off all the oil from its surface. Consequently, when pasting the paper back to it, oil is left on its surface and prevents good adhesion. This ultimately causes separation, particularly when stock is embossed.

"Whether this one advantage alone will be sufficient to maintain the use of the substitute foil we are now making in preference to metal foil when it becomes available again, we do not know. Our guess is that aluminum metal foil when again placed on the market will be priced very low and will sell as a low-priced item instead of a high-priced one.

"Another difficulty which we have all been up against is the lack of kraft pulp from Scandinavian countries. Their particular kraft was strong and pliable and was used in any number of different specialty papers which we use. As a substitute, we have been obliged to adapt ourselves to the domestic kraft, mostly from the South. This is inferior in point of flexibility. It is strong but brittle when it comes to folding. In spite of this disadvantage, however, we have manipulated our coating and embossing pressures in such a way as to correct this disadvantage to a large extent so that our customers are still satisfied.

"One serious threat to the future continuation of coated papers is in the chemical field. Specifically, we would mention the first threat as that of size. All colors which are used for coating paper must be mixed with some size or glue to hold them on the paper when dry. The best size for this purpose, which has been used universally for a great many years, is what is known as casein and is made from milk. The government has now commandeered the milk supply to such an extent as to make the supply of casein very scarce. Along with everyone else, therefore, we have been obliged to experiment with substitutes to see if we could not find a suitable size to take its place.

"To date the best substitute size is made from corn starch. Whether or not this will replace casein will depend entirely upon whether or not casein goes off the market completely. There is a report that it may still be imported from South America in large quantities with the reduction of the tariff rate which has now taken place. Another possible size is made from soy beans. However, this is inferior to that from corn. Naturally we are experimenting all the while anticipating shortages of not only size but colors and there undoubtedly will be other adjustments which we will have to make."

The chemical manufacturers are finding that shortages lead to shortages. The experience of Monsanto Chemical Co.'s Plastics Division is typical:

"Until a few months ago, we thought our greatest 1941 contribution to packaging was the development of polystyrene molded closures and containers to replace unavailable aluminum and urea plastics in many fields of use, but especially in that of cosmetics. Now we're not so sure. This product is a polystyrene molding compound and by virtue of the use of styrene monomer in the manufacture of synthetic rubber, it bids fair to become a lot scarcer than some of the 'scarce' materials it started out to replace."

The Sun Tube Corp. gives us an interesting account of their new alloy which, in view of current shortages, has been little short of a sensation for users of collapsible tubes:

"This alloy was the result of a research program in metallurgy as applied to collapsible tubes, which was initiated several years ago by the establishment of a fellowship at Carnegie Institute of Technology under the direction of Dr. Robert Mehl and Dr. Gerhard Derge. There were several metallurgical problems in tube manufacture for which no solutions could be found in existing works on soft metals and the research program started at 'scratch' to fill the gaps in existent literature. In the course of the investigation, the properties of several hundred alloys were determined and one group of these seemed to have greater advantages than others.

"Early in the defense program, tin was declared to be of the greatest strategic importance. This declaration was accompanied by the request that the collapsible tube industry do something about the conservation of tin used in collapsible tubes. The industry was accustomed to use (1939 and 1940 figures) about 3,500 tons of tin per year. Aluminum tubes had been in use, largely for shaving preparations and, when

8

9

10

11

12

their use was stopped, tin was used to replace aluminum. This together with the increased use of toilet preparations, which has increased with the national income, brought the estimated use of tin in tubes up to about 5,600 tons per year.

"The tube industry had a substitute in the tin-coated lead tube (also called 'laminated,' 'tin-lined' and 'tin-plated'). This type had some disadvantages, some of which would be overcome by the use of a homogeneous metal like this alloy. Both types showed an indicated saving of about 70 per cent of tin. When the industry and its customers were asked to use substitute tubes for packing shaving preparations, both tin-coated and tin alloy tubes were put into use with an indicated saving of about 1,000 tons of tin per year.

"The use of this alloy has been offered to the tube industry and to manufacturers making products packed in tubes for the period of the emergency on a purely nominal basis."

In increasing numbers, packages making use of substitute materials are beginning to appear. Almost invariably, particularly in the case of large producers, a long period of testing and experimentation must precede the actual change. A case in point is the experience of the Peter Callier Kohler Swiss Chocolates, Inc., makers of the widely known Nestlé chocolate bars. (*No. 8*) Traditionally, these bars were packaged in tin foil, but nearly two decades ago the company pioneered in the use of aluminum foil. Shortly after World War II started, in anticipation of shortages, they began looking for substitutes and their research became very active late in November, 1940.

Their problem involved first, the selection of satisfactory material and second, adaptation of their packaging machinery. After tests to determine preservation and protection under storage and retail outlet conditions over a period of months, they finally selected a 20-lb., tinted, bleached glassine for the inner wrap to replace the foil. An outer wrap of 30-lb., white, opaque glassine replaces the previous transparent glassine. Adequate protection was the chief consideration in the choice of material and the colors were selected in collaboration with their advertising agency and paper suppliers, the Riegel Paper Corp.

Machinery adaptation proved less of a problem than anticipated. Adjustments, easily made by their own mechanics, enabled their machines to handle the new materials in mass operations quite as advantageously as the old. The factory at Fulton went into production early in the summer this year and the new packages began to appear in the retail outlets in the fall. Dealer cooperation was enlisted by means of notices in the containers, explaining the new package material, but stressing "no change in quality." Judging by sales curves, consumers were found to be fully prepared for the change. Whether Nestlé chocolate bars will continue to be packaged in this manner or whether they will return to foil when the emergency is over, only time will reveal. The utility values of the new wrap have been thoroughly tested, but the makers only say, "We think it's as good."

Functional considerations are as important as retention of appearance in use of substitute materials or, for that matter, in making package changes generally. Standard Brands, Inc., summarized their 1941 developments thus:

"Our outstanding packaging development for the past year is a new flat-type tea ball, created by the late George R. Webber and used on Pledge Brand Tea. (*No. 9*) It comprises a bag made of two plies of filter paper welded together with identity tag and string attached by the same operation.

"A fully automatic machine was built for quantity production, which turns out 70 tea balls a minute, impressing the brand name and the separation line on the paper as the bag is formed.

"Another packaging development worthy of special mention is the new dry yeast package. (*No. 10*) This is a pouch-type envelope holding $6^1/_2$ grams. The package was designed by the Standard Brands Packaging Development Department in collaboration with Shellmar Products Co., which designed the equipment for producing these packages. The envelopes are made from a laminated, opaque material which is closed by means of heat seal. Thirty-six of these envelopes are packed in a carton which can be used as a counter display."

From San Antonio "down Mexico way" comes a new package for Gebhardt's Chili-Quik, a dry chili powder. (*No. 11*) When aluminum foil became unobtainable, they resorted to a new type of envelope, lined with a rubber hydrochloride sheeting. This envelope, though slightly heavier and not quite as glossy as their former aluminum foil envelope, seems quite satisfactory. The difference in appearance is so slight it would be difficult to detect, they say, unless both types were compared side by side.

Wisconsin cheeses are shipped all over the world. Cheese packages must preserve as well as appeal to the buyer. The Behle Bros. Co., cheese makers who conduct a direct-to-consumer mail order business, is meeting the shortage situation and practicing conservation:

They have developed their own "patented full-vision food package," to reduce the use of cellophane. This is a single window box, doing away with a complete wrap, which enables them, they declare, to ship cheese to the four corners of the world in good condition. Another saving is afforded by an ingenious insert which enables them to avoid using excelsior. Their individual packages are now wrapped in enamel paper of high colors instead of foil with but a slight sacrifice in appearance. Their gift packages, now on an economy basis, are nevertheless attractive and appetizing. (*No. 12*)

1941 Debuts

While conservation, economy and substitute materials are rightly occupying the center of the packaging stage, those principles aren't excluding thoughts of new packages for consumer convenience or for sales' sake.

The Economy Grocery Stores, on the three panels of their 1941 labels, go government requirements one or two better. (*No. 13*) All mandatory information occurs on these labels, plus grade indication, (A.M.S. continuous serving) plus consumer information regarding the contents. This, they feel, is an important step forward in terms of consumer confidence.

The Borden Co.'s very convenient and economical new 2-qt. milk bottle was developed with all those points in mind.

13

(*No. 14*) Introduced in July, 1941, among the advantages claimed for it are: (1) saving in home refrigerator space of 33 per cent over a like quantity in 1-qt. bottles; (2) perpendicular grip grooves, blown in the bottle, permit firm grasp; (3) compactness of shape minimizes air space in packing case, providing better refrigeration en route to consumer; (4) space savings are afforded in bottling plants and in transit and (5) greater handling ease for delivery men per volume of milk delivered.

Although utility and economy very properly dominate package planning at present, re-design to tell a sales story still has a place in the picture. Example is the new package for Old Hickory Smoked Salt, (*No. 15*) which was designed to convey the fact that the product was actually smoked with genuine hickory wood smoke.

Luxury packaging is probably destined for drastic reduction, but while it lasts, let's enjoy it! The White King Soap Co.'s "Sierra Pine" toilet soap (*No. 16*) appears in redwood boxes wrapped in cellophane. Some of the goods are going to the retail outlets in a gift wrap which can be removed—if unsold—after Christmas and disposed of as regular stock.

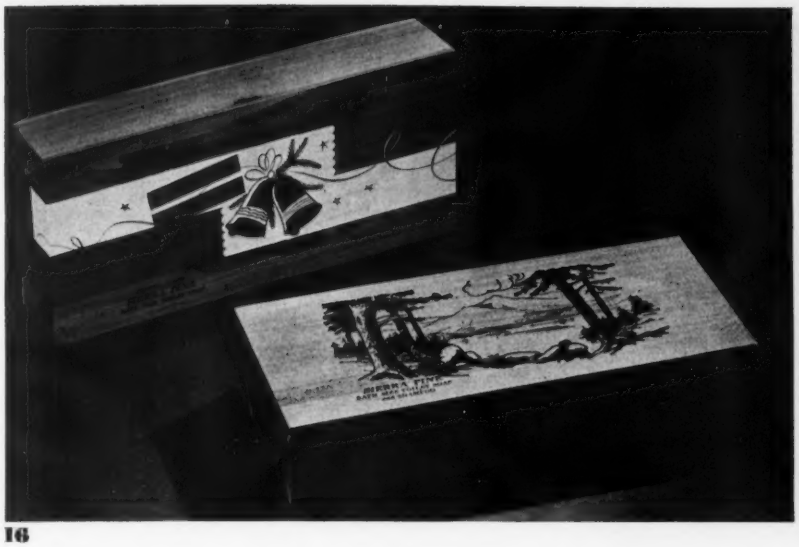
Elevating the hitherto neglected shoe lace is the function of the new "Shubraid" counter display. (*No. 17*) Whoever has experienced the helpless feeling which follows a break in his shoe lace, will appreciate seeing, at the point of sale, this reminder to purchase a most easily forgotten article.

Starting their package planning with what amounted to a chart of available and non-available materials, the Prince Dried Fruit Co. evolved a package which is beautiful, affords full protection and uses packaging materials which are plentiful. (*No. 18*) Their own story reveals their answer to priority adjustment:

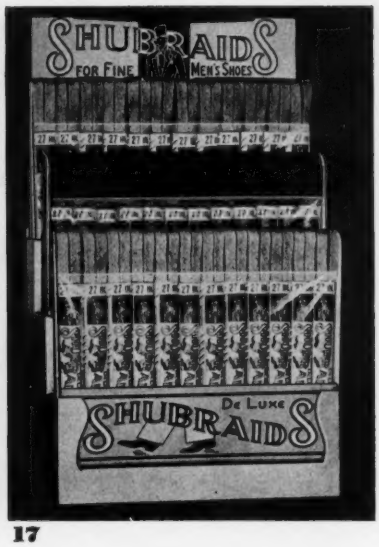
"Before defense needs became acute, we had planned to use

14

15



16



17

a newly patented closure, requiring a rubber gasket and a special metal rod, for our wine jelly. But, although the materials were still available, in the interests of defense we felt it advisable to avoid using them if possible. At first it seemed to us that no substitute would assure a proper seal, but after much experimentation we found the process which we are now using. This closure consists of an oil-lined, cardboard disc, glass cover and the Social Treat circular die-cut head label which seals all sides of the glass cover to the jar with equal pressure.

"Although we now had a substitute, our troubles were far from over. New methods differ from the conventional ones and of all existing machinery none could be adapted to seal this label. Hand work did not safeguard our package as uneven pressure would permit air seepage. Finally in desperation after many failures, some reminiscent of Rube Goldberg cartoons, we designed a sealing machine which completely seals by exerting accurately even pressure."

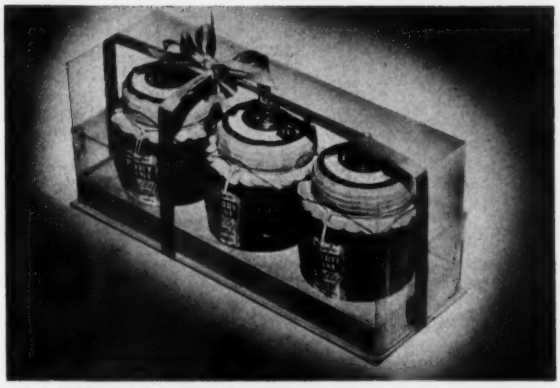
Mulford's Potted Lilies and Potted Bulbs (*No. 19*) are now packaged in a manner which effects economies without greatly impairing appearance of protective qualities of their old cartons. The new cartons cost less because they use fewer colors, require less board, eliminate the "window," material for which is now on critical lists, and they permit an easier packaging operation.

The new "Military Tin" of cookies, planned as a gift package for service men by the Federal Sweets & Biscuit Co., is more than a patriotic package in appearance. Defense needs were considered through the use of black iron instead of tin plate.

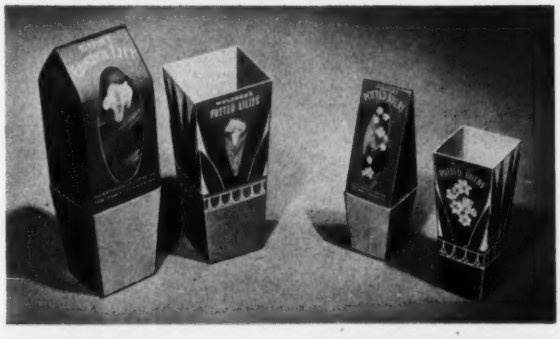
Army and navy service men develop an insatiable craving for sweets. O'Brien's, Inc., is using vacuum-pack tin cans which have been successfully shipped far afield. Checking with their retailers, they found this package was being widely purchased by women as a gift to send to service men, because the giver felt that the vacuum tin would retain flavor and freshness for an extended time.

To many people, dates are just dates, but not to the customers of Sniff's Date Gardens. (*Nos. 20 and 21*) "For 18 years," Mr. Sniff writes, "we have packaged many varieties of dates and citrus fruits from our roadside stores. In some of our packs the varieties are named. Another of our packages we offer as a unique job of putting up dates. Our containers

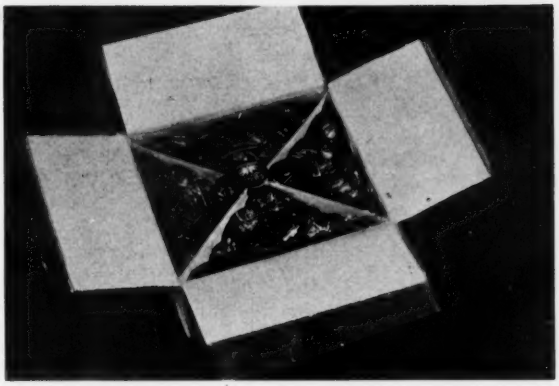
18



19



20



21

22

23

24

are cellophaned by the supplier and come to us with a loose bottom and we pack the top layer first, stapling the loose bottom in by hand."

The "Home Service" brand of soup mix, manufactured by G. A. Goodrich Co., represents economy in several directions. (*No. 22*) A 7½-oz. carton, they write, contains sufficient soup mix for 12 servings. "Please note," they add, "that we are capsulating the chicken fat and this, in connection with the noodles and seasoning and other ingredients, make for a very fine chicken soup." Cardboard is conserved, they point out, by the use of three inner bags containing the various ingredients, all within the single outer carton.

Packages, as everyone knows, are being subjected to unprecedented demands by the necessities of war. Dramatic example was afforded when the navy tested a metal edge package containing Sharp & Dohme's blood plasma unit. (*No. 23*) Such products may often be urgently needed in disaster-stricken areas as well as by isolated units of the army and navy accessible only by air. So, how were safe air deliveries to be made?

This pharmaceutical house has been packaging plasma units for the Red Cross in sturdy, metal edge boxes. The box maker was confident the packages could take it. But no one knew for sure that they could be dropped from an airplane on to the hard ground or into the water and have their contents remain unharmed. The blood plasma is put up in glass under high vacuum; the package also contains a bottle of distilled water and some delicate instruments. Would these be broken?

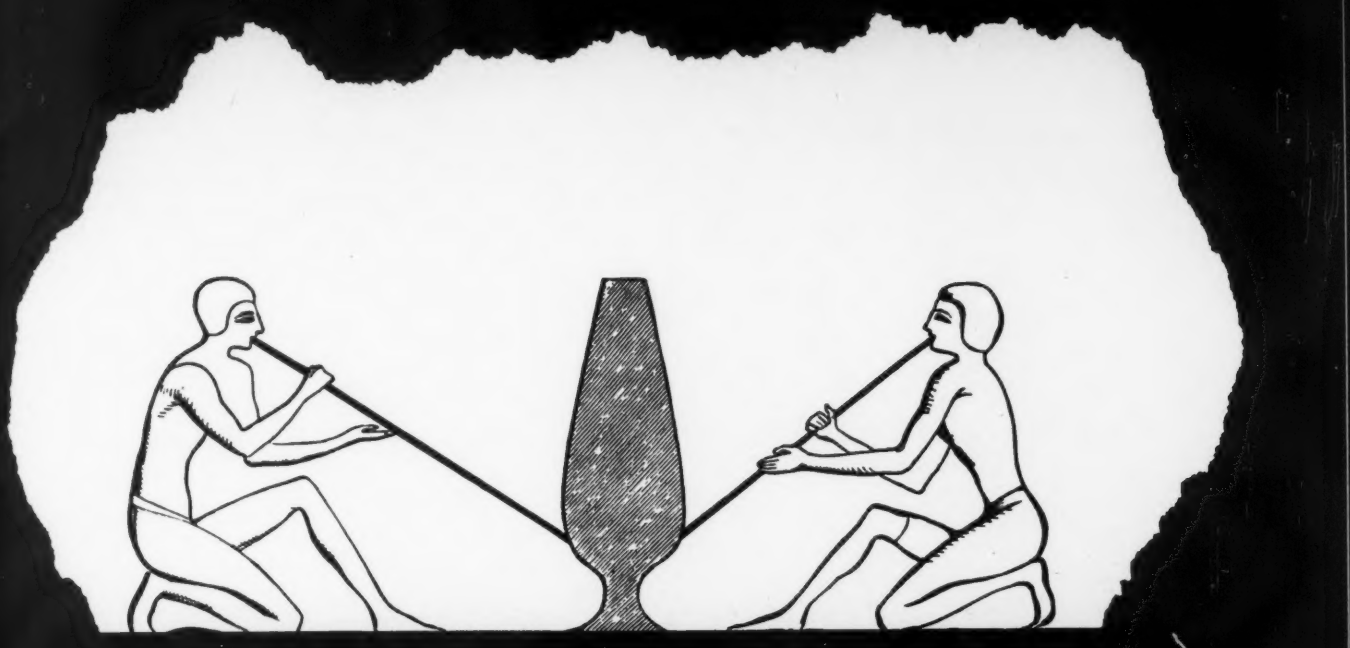
Navy flyers dropped three bundles (*No. 24*) (each containing four packaged plasma units) into the Delaware River, where they were picked up by a navy boat and delivered for inspection to Dr. Aims C. McGuinness, chairman of the local Red Cross drive for blood donors. Dr. McGuinness found the contents of the packages unharmed by the drop and untouched by water. Individual packages in this test were sheathed in envelopes of rubber hydrochloride sheeting.

Then three of the bundles were dropped by parachute from the plane on to the navy yard airfield. Picked up by Red Cross ambulance workers, these also were found by Dr. McGuinness to be undamaged.

Most pleasing to makers of the metal edge box was an unpremeditated test. One plasma unit in its metal edge box was released from the plane *without* a parachute, hurtling unchecked down to the field below. It landed with glass containers unbroken.

Consumer convenience, coupled with a plan of merchandising the project to and for retail druggists, was the mainspring which activated Brockway Glass Co.'s line of bottles for packaging of prescriptions. This line, they declare, embodies all modern packaging refinements plus a plan by which the retail druggist can build consumer confidence. Of practical help is a store door transparency for dealer use. A booklet which explains the entire plan to the dealers has been prepared.

With the restrictions on metal foils, cellophane, plastics, metal containers and practically every other material that goes into packaging, the coming year will see many changes in package design. Even as this is written there is more and more evidence of the trend of the times, of the desire to use materials which will not necessitate redesigns in the immediate future. Out of all this—just as it has in Britain—will come many new developments—many new adaptations which after the emergency is over, everyone will say "are better than we ever had before."



AS CLEAR AS....

Man-made transparency is nearly as old as history. It has captured the imagination of men from ancient times to the present. Today, transparency is capturing the consumer's dollar. This powerful force is being built into packages, to sell the goods of modern manufacturers.

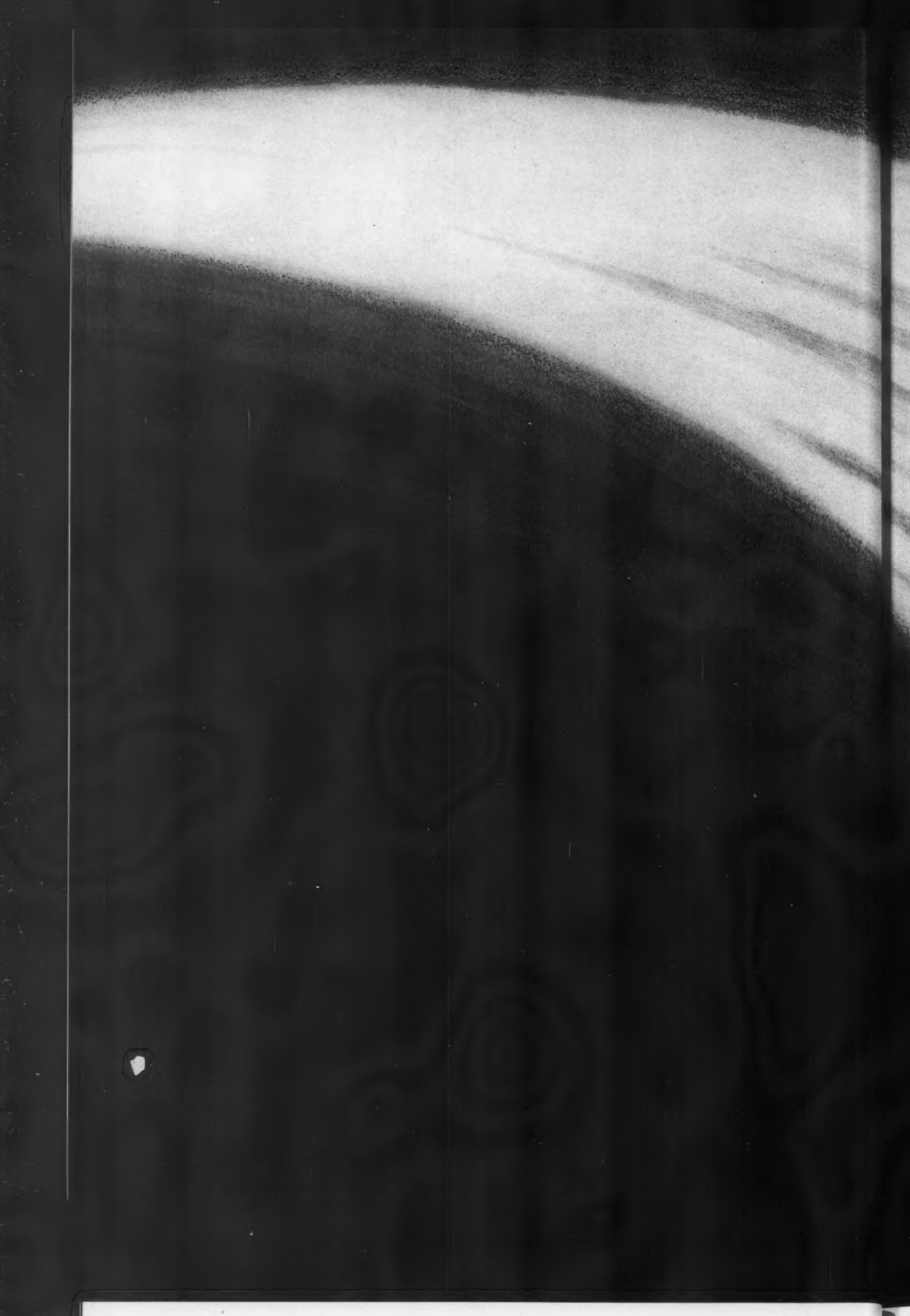
Yet, in some cases, packagers who know of this potent sales weapon have not used it because of its expense. The task set Burt engineers was to produce *transparent* packages in the same *automatic,* speedy, economical way that other Burt packages—set-up paper boxes, folding cartons and displays—are produced. In solving this problem, we were forced to design and build much of our own equipment—as we have often done in the production of other package types. Our automatic machinery and our speedy, economical service are ready to manufacture your transparent and set-up boxes, your folding cartons and displays when and how you want them.

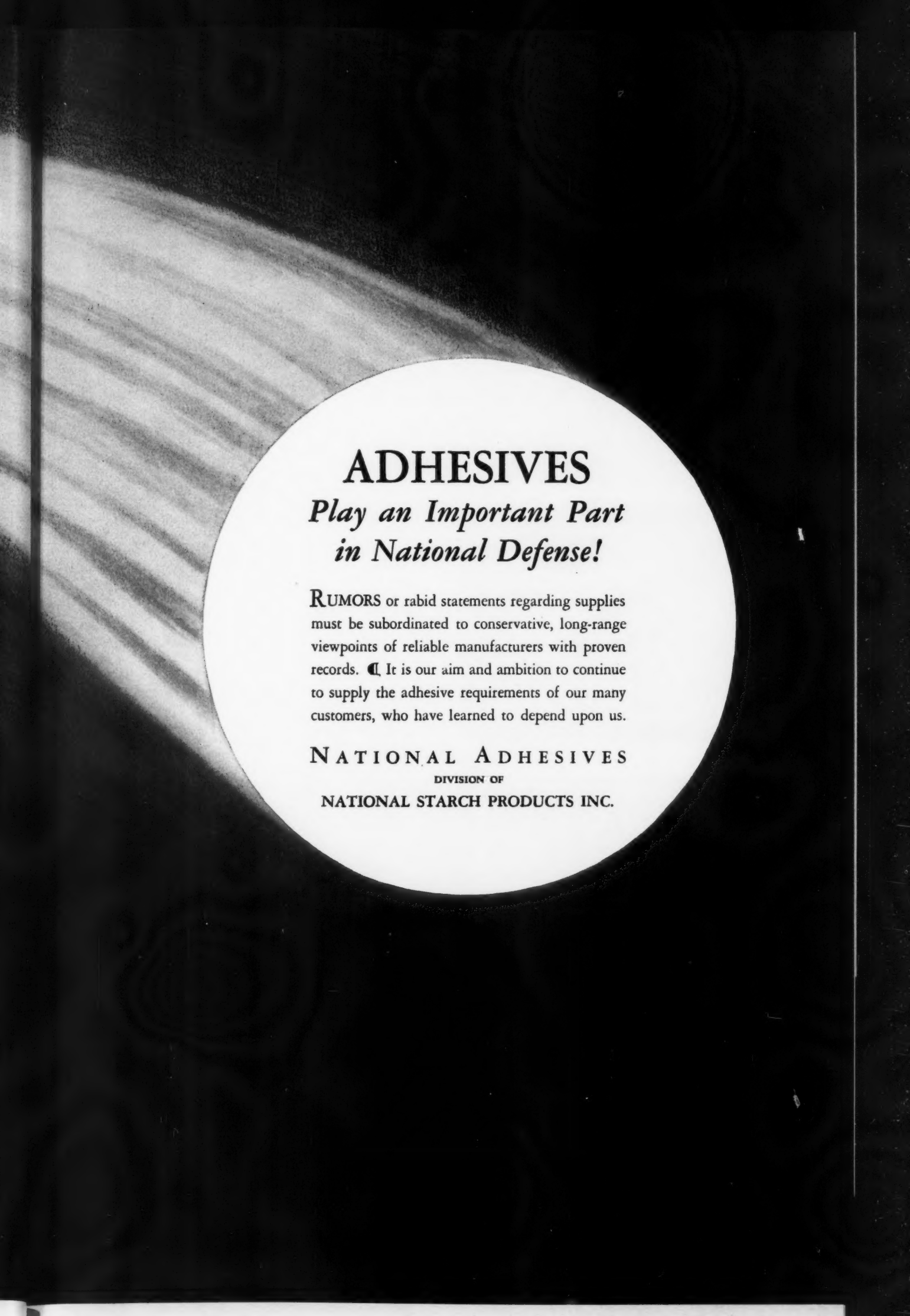
F. N. BURT COMPANY, INC.

500-540 SENECA STREET, BUFFALO, N. Y.

NEW YORK CITY · PHILADELPHIA · BOSTON
ST. LOUIS · ATLANTA, GEORGIA · CHICAGO
CLEVELAND · CINCINNATI · NEW ORLEANS
MEMPHIS · MINNEAPOLIS · KANSAS CITY
DANVILLE, CALIFORNIA (Near San Francisco)
A. G. Spilker, P. O. Box 126, Telephone: Danville 27

CANADIAN DIVISION: Dominion Paper Box Company, Ltd.
469-483 King Street, West, Toronto 2, Canada




ADHESIVES
Play an Important Part
in National Defense!
RUMORS or rabid statements regarding supplies must be subordinated to conservative, long-range viewpoints of reliable manufacturers with proven records. ¶ It is our aim and ambition to continue to supply the adhesive requirements of our many customers, who have learned to depend upon us.
NATIONAL ADHESIVES
DIVISION OF
NATIONAL STARCH PRODUCTS INC.

New Machinery

If the 1941 harvest of new packaging machinery is not as great as in normal years, there is an excellent reason for it. Many of the manufacturers have been drafted into direct service for the army and navy, but there still have been developments devoted to peaceful activities, some of them stimulated by the necessity to find substitutes for metals.

The New Jersey Machine Corp. has devised a substitute for some of the "change parts" in their labeling machines. When the emergency began, their engineers experimented with substitutes for the hoppers which feed labels to the machines and also the bottle supports in which the containers rest to receive the labels. Both of these items are subject to limitless variations in size and shape and, since manufacturers who already have installed this equipment frequently find it necessary to change the size and shape of their containers, it became obvious that their needs could not be served unless satisfactory substitutes for the brass and cast iron were found.

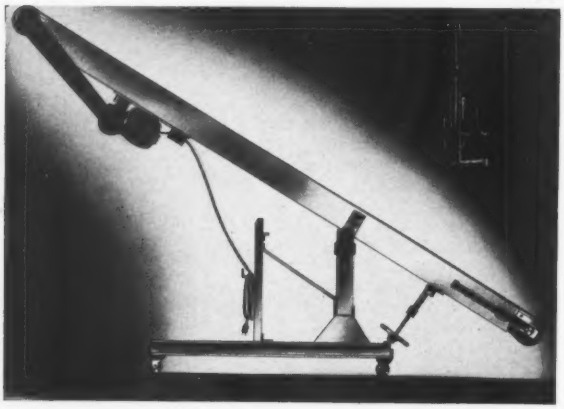
As a result of exhaustive research, they found a plastic which possesses the necessary characteristics enabling it to withstand the usage and handling to which both hoppers and bottle supports are subjected. This has been found to give complete satisfaction in every case where it has been used. Since the cost of change parts has always been comparatively low, this new method had to be one which would limit the cost to approximately what had been set as standard for the metal parts. Acceptance of this plastic is predicted.

Conveyors are coming in for extra duty these days. The Standard Conveyor Co. has designed a new wood roller conveyor for handling explosives, and the Lamson Corp., though largely engaged in defense work, has developed a new utility conveyor (*No. 25*) of the adjustable belt type for which these practical advantages are claimed: (1) easily portable, (2) ideal in warehouses for piling cartons and boxes, (3) several conveyors in a series can be used to move goods to and from inaccessible corner, (4) adjustable for horizontal position to a tilt of 30 deg., (5) 14 in. continuous belt with no side guards so that larger overhanging loads can be handled, (6) approximately 11 ft. long, (7) maximum limit 100-lb. loads, (8) powered by $^1/_3$ H.P. single phase motor, (9) speed approximately 70 ft. per minute.

After several years of exhaustive development work, Seybold-Morrison have introduced a new type SL box stitcher head which they consider a revolutionary development. (*No. 26*) Simplicity of design, combined with increased strength of all working parts, are among its features. Special alloy steels are used in all parts subject to heavy wear and strain. All parts of the stitcher head mechanism are quickly accessible. (Only four socket-head screws are removed to free the face plate and expose the working parts.)

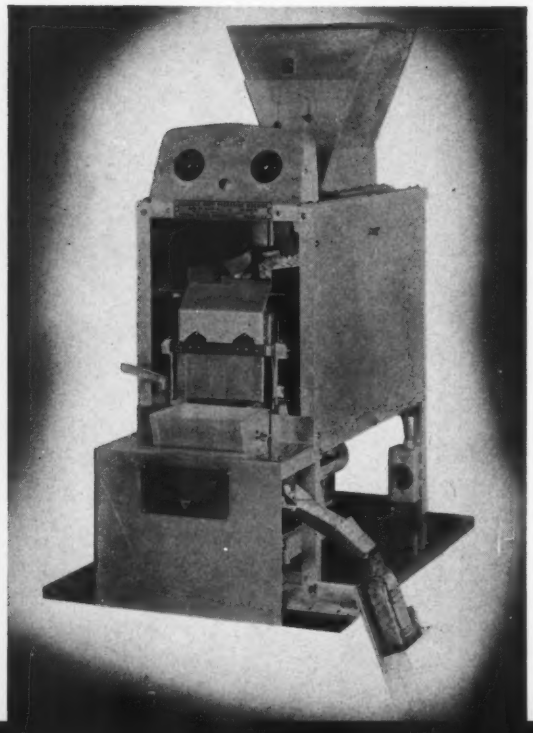
Accurate feeding of the wire is assured by the design of the positive wire feed mechanism with over-running clutch. Simple wire lubrication device eliminates drag as the wire feeds through curved passages. The feed block setting provides a visible gauge for stock thickness. Turning a hand screw adjusts wire draw and automatically equalizes stitch legs. Wire is cut off by upward movement of round die which prevents disturbing the wire in the mandrel after cutting off.

25



26

27



(*Page 52*)

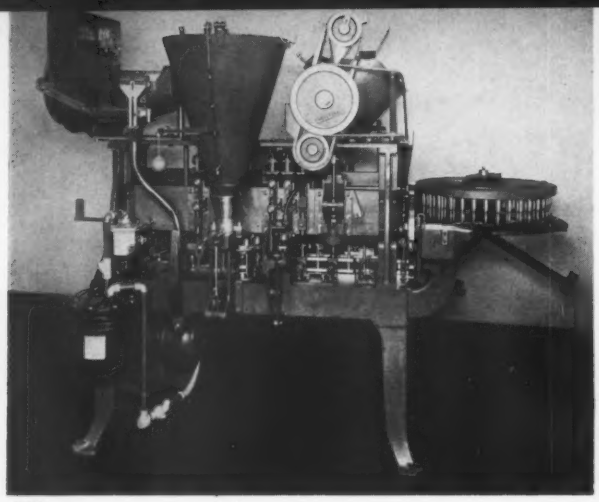
THE FINEST PACKAGES GROW ON TREES ★ *CREATED BY NATURE,*

FASHIONED BY PILLIOD INTO YOUR MOST MODERN PACKAGE FOR 1942

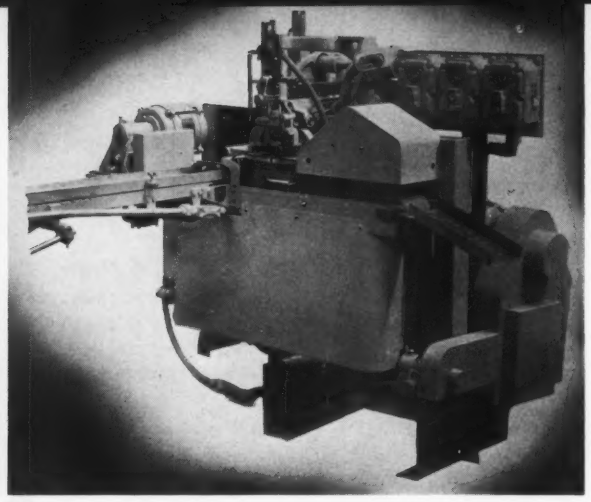
The quiet splendor of natural wood steps up the *desirability* factor, provides the most flattering setting for your gift offering. You'll see your Pilliod packages in the choicest display spots . . . helping your merchandise capture initial enthusiasms, inspiring more sales. ❦ ❦ ❦ Fine wood is mellow, rich, dignified, yet vibrant with personality. It is pleasantly familiar yet always new. It is adaptable to an endless variety of stylings. ❦ ❦ ❦ We know wood at Pilliod because we have "lived" with it for almost half a century. We may be able to help you find the *inspired* package toward which you have been striving. May we show you some of the many possibilities now?

THE PILLIOD CABINET COMPANY · SWANTON, OHIO

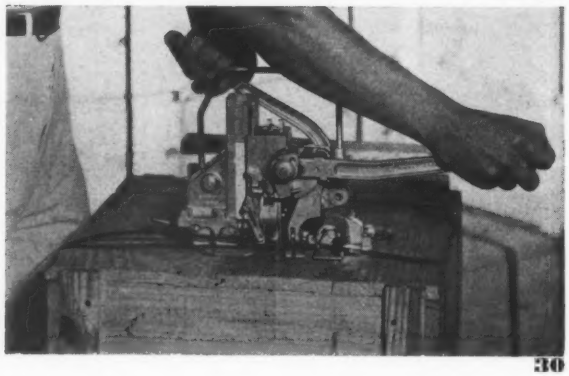
THERE IS NO SUBSTITUTE FOR THE RICHNESS AND BEAUTY OF NATURAL WOOD



28



29



30

The type SL head is standard equipment on all Seybold-Morrison bottom stitchers, top sealers, combination units, side seamers and arm machines. The wide range of machine sizes and practical throat-depths meets most requirements.

The Syntron Co. is just placing on the market a new line of water-powered hydraulic packers or jolters. These are for effecting a dense compaction or settlement of materials in barrels, drums, etc., particularly of light, fine, powdery materials that have heretofore been most difficult to pack. The jolter is made up of a deck plate on which the barrel, drum, carton or other container to be filled and packed is placed and a hydraulically operated cylinder which lifts the table and drops it with a sharp jolt approximately once per second. The speed of the jolts per minute as well as the overall lift are controllable by a hand valve in the water line. Surprisingly little water is required for operation. At water pressure of about 50 lb. per sq. in., and where lower pressures only are available, a small, electric motor-driven pump with a closed circuit can be supplied to operate the equipment. (Illustrated in October Modern Packaging.)

Significant addition to the Triangle Package Machinery Co.'s line (*No. 27*) is a machine to weigh and fill into containers metal parts such as nuts, screws, corrugated steel fasteners, washers, buttons, nails, tacks, etc. This weigher is an electrical, vibratory feed unit, synchronized with an inclined conveyor belt so designed that a bulk load is filled quickly into the package and final weight delivered is at the rate of one piece at a time, thereby assuring accuracy that is almost perfect by count. These machines are in use in plants manufacturing nuts and screws for the aircraft industry. This same type of machine has also been used successfully to weigh and fill small neck bottles with pills and tablets. It is similar in design and operation to the metal specialties machine, except that an inclined conveyor feed belt is not required.

Reporting for direct duty in military service, Package Machinery Co. is building a .30- and .50-calibre shell loading machine (*No. 28*) which takes the brass cartridge, fills it with a pre-determined amount of powder and inserts and clamps the bullet. This isn't the whole story, because there are many safeguards which throw out any defective cartridges during the stages of manufacturing. These safeguards are really the important part of the machine. For instance, light or overweight powder, a shell which is too long or too short or one which is not properly clamped—all are thrown out.

Until the emergency got under way, the government arsenals and ordnance plants sealed cartons of small arms ammunition by hand, necessitating the use of drying ovens and limiting the output to 10 boxes per minute, per man.

The New Jersey Machine Corp. adapted one of their standard labeling machines to do this job mechanically. The machine applies the labels, which are wider than the face of the carton, and tucks the ends around the edges, so that the labeling and sealing operation is performed at the same time. The speed of this operation, reported in actual production, is up to 50 cartons per minute. This machine is capable of handling the .30-, the .45- and the .50-calibre small arms and machine gun ammunition. The work has been so gratifying to those in charge that machines of this type have been supplied to Frankford Arsenal, Philadelphia; the Remington Arms Co.'s plants in Bridgeport, Conn.; Lake City, Mo., and Denver, Colo., and also the Federal Cartridge Co. at Minneapolis; Winchester Repeating Arms Co., New Haven, Conn.

Engineers from the staff of New Jersey Machine Corp. have been in direct consultation with members of the Army Purchasing and Ordnance Staff on methods and designs for mechanically speeding up and improving the handling of ammunition. While these steps are still in the formative stage, it is too early to give details and it is doubtful if the army authorities would consent to divulging information about the type of equipment and the uses to which it would be put. New Jersey Machine Corp. has built and delivered for use certain pieces of equipment for grinding and polishing the thousands of lenses needed for range finders destined for use by the army and navy. A vacuum pump, manufactured by this same company, is being used extensively for the routine final cleaning of range-finding lenses, prior to their being packed in chamois pouches, for subsequent use on various types of range finders. (*No. 29*)

Large quantities of steel tape, according to the Acme Steel Co., are used to reinforce defense shipments as the Federal Government recognizes the value of strap for its protection against damage and loss. (*No. 30*) The packing specifications of many items include strapping for medical supplies, ammunition and other products which keep armies moving.

AN AMERICAN INSTITUTION SERVING AMERICA'S INTERESTS AT HOME AND ABROAD

A NEW RECRUIT FOR FOOD PROTECTION

Standing at attention with other members of Rhinelander's famous regiment of protective papers is Pliolux, a superior moistureproof, greaseproof, heat-sealing and transparent material. Already adapted to various phases of industrial "defense" work, it also serves civilian needs in protecting many of America's food products. • Equally important in their various uses are other Rhinelander papers—each with an established reputation "for long and faithful service." When you have need for a protective paper material, come to us; we're confident of our ability to serve you with America's finest.

Rolfe Becker
PRESIDENT
RHINELANDER PAPER COMPANY

RHINELANDER
PROTECTIVE PACKAGING
Papers

FROM THE BEST THAT'S MADE TO THE CHEAPEST THAT'S GOOD

Genuine Greaseproof
Laminated Frozen Food Wrappings
Confectionery Papers
Cereal Wrapping Papers

Laminated Greaseproof Papers
Lard and Shortening Liners
Bakery Product Wraps
Coffee Bag Papers

Cracker Box Liners
Greaseproof Innerwraps
Glassine Papers, Plain, Colored and Embossed

Wax Laminated Glassine
Opaque Label & Bag Glassine
Packing Industry Wrappings—and Specialties to order

RHINELANDER PAPER COMPANY • MILLS AT RHINELANDER, WISCONSIN, U. S. A.

London Editor Looks at the Future

*by Denys Val Baker**

For some months past now, there has been a good deal of discussion in British trade circles over the question of post-war marketing. The intensification of the war effort has tended to side-track these discussions and it is also true that both the government and manufacturers have agreed that, under present circumstances, no post-war planning justifies the maintenance of a special department, with valuable skilled labour, if that department and labour could be used for more urgent and essential war work. In any case, Limitation of Supplies Orders and the shortage of raw materials deprive the manufacturer of any raw materials for experimental purposes and of the machinery for carrying out the experiments. There are many British firms that are very anxious to develop new products, to watch trends of purchasing power, to keep in touch with U. S. and Continental production practice and so on. Unfortunately, these activities do not help to wage an all-out war effort; therefore, they have to be dropped. That is one of our saddest war lessons—a modern war leaves no leisure, materials or labour for experimental and research work for post-war production. Because she is now devoting all her production facilities to war work, Britain is deliberately weakening her productive capacity in the inevitable scramble for post-war trade.

Fortunately, there is more scope for post-war planning in the more general fields of selling and marketing and there are some very interesting conclusions to be drawn from a recent *Shelf Appeal* survey. Provided that the British Government continues its present policy of subsidising various essential trades to prevent inflation (the Ministry of Food spends £100,000,000 a year in this way), it is not anticipated that the heritage of debt left by this war will be any crushing burden, provided also, of course, that prices are not allowed to fall unduly after the war. Nor is there any genuine fear of unemployment on an overwhelmingly large scale. For instance, the British Ministry of Works will be able to absorb hundreds of thousands of workers in the huge re-building and re-housing schemes which are now under consideration for the post-war era.

Shelf Appeal sent out a questionnaire to all leading British manufacturers and these were some of the general conclusions about the post-war situation: (1) Because of a lack of national rehabilitation policy for heavy industries, what used to be called the "special area" (i.e., big centres of unemployment) will revert to their unenviable distinction and will still provide the proprietary manufacturer with dead markets. (2) However, there will be a continued prosperity in the rural areas of Britain, as it is regarded as inconceivable that any British Government can ever again neglect the welfare of the country's most important defence industry. Some of the evacuated families, having tasted country life, will remain. Some of the directors of the evacuated companies will ask themselves why they need again pay city rents. And the higher wages which farm labourers have won will not be relinquished, though the number of workers may well fall with progressive mechanisation compelled by these higher wages. (3) The class whose purchasing power has been most drastically curtailed by war—the wealthy and upper middle class—will survive the war. If it bears and continues to bear the burdens of income tax, super tax, death duties and all future fiscal instruments for redistributing income, it is also the recipient of the greater part of the interest on the debt which the community is incurring. (4) Unless it should become necessary to resist invasion in Britain by a "scorched earth" policy, even the most intensive bombing attacks will be less destructive of Britain's capital equipment than were the battles of the last war on the industrial areas of northern France and Belgium. And, so long as the productive capacity of the country remains high, there is no reason why national income and purchasing power should fall short of the pre-war level.

Among other more specific questions, *Shelf Appeal* asked: "Do you anticipate a period of fierce competition after the war or a transitional period in which government control will continue with the object of easing the passage from a war to a peace economy? Do you expect that new entrants into the consumer-goods trades will be excluded by law?" Conclusions were that there will be fierce post-war competition, but that this may be mitigated by the restraint of trade associations, whose prestige has been greatly enhanced by the war. It is not thought that British Government action will be necessary to protect existing manufacturers from the incursion of new competitors, for temporary shortages of machinery will be effective in excluding new manufacturers.

Another question was: "Which policy will pay better—to market new products, emphasising their novelty, or to attempt to rehabilitate old, familiar brands?" In other words, "Will the old brand names retain their good will?" The majority of firms rather surprisingly look more to the launching of new products than to the revival of temporarily shelved ones. They feel that even a well-remembered product can be so quickly dubbed old-fashioned and pre-war. Nevertheless, 90 per cent of the firms interviewed believe in continuing with advertising throughout the war.

There is one other interesting aspect of post-war planning and that is the position of the retail trade. News has just come through that the Board of Trade's special committee, formed to consider ways of "concentrating" the retail trade, are recommending quite considerable amalgamations wherever possible. Mass Observation, the important British research organisation (similar to your Gallup body) recently stated that their surveys definitely showed, to use a broad expression, that "after the war we shall be more than ever a nation of multiple firms." At the beginning of the war there were 19,000 shops in Glasgow, second largest city in the British Isles. Today some 20 per cent of these have already closed down. More and more small shops are finding it impossible to carry on, costs having increased out of all proportion to prices and income. There are innumerable extra charges, such as fire-watching and war damage insurance and there are big rises in prices of such articles as paper bags and other

* *Managing editor, Shelf Appeal, London.*

A BIG HELP IN THE KITCHEN!

Cooks . . . old and young . . . all face the same problem today. Olive oil has gone sky-high in price . . . yet its flavor is essential for the proper preparation of so many dishes.

C. F. Simonin's Sons of Philadelphia have come to the rescue! Olio Simonini . . . a salad oil with a base of 20% of the finest virgin olive oil obtainable . . . gives home and restaurant kitchens an oil with the flavor and aroma of imported olive oil . . . and at only about a quarter the price.

Crown Cans provide perfect protection for Olio Simonini that combines the superb flavor of fine olive oil and peanut oil with a moderate price. It's a golden can by Crown that guards the golden goodness within until Olio Simonini reaches the home.

Why not bring your packaging problems to Crown Can . . . where the right solution will be provided.

CROWN CAN COMPANY, PHILADELPHIA, PA., *Division of Crown Cork and Seal Company,* Baltimore • St. Louis • Houston • Madison • Orlando • Fort Wayne • Nebraska City

INDEPENDENT AND HELPFUL CROWN CAN

Posters by the British Ministry of Information for the Life Line Exhibition.

packings. These same increased costs can be absorbed by the more strongly entrenched multiples and many of them are taking the opportunity of acquiring private businesses that are unable to carry on.

So much for general trade trends. In the packaging field, the standardisation programme which I outlined in my last survey is being put into operation as rapidly as possible, but it is a very big job and will take some time. Most packaging problems of today now seem to revolve around paper—and the paper supply position is critical. Unfortunately, the government has not yet accepted the view that paper is a basic material of war so essential that considerations of cost are as little relevant as they are in the cases of oil, rubber, steel or food. Modern war cannot be fought without paper. Apart from the very considerable tonnage used directly by the munition industry, paper is the medium of control, of propaganda, of distribution. Every purchase, every order, every licence, every regulation and every registration involves some documents. No doubt there are too many documents, but the irreducible minimum would still require a quantity of paper far in excess of the peace-time requirements of industry. What is wanted is a completely national organisation for salvage collection and it appears that this is now being supplied, as the Ministry of Supply has set up a Salvage and Recovery Board and the representatives of all branches of paper and board salvage have combined to set up a new company, the Waste Paper Recovery Association, Ltd., which will work in close conjunction with the Board in attempting to increase the volume of paper saved.

Some interesting schemes for saving waste have been put forward. One is that the board made on Fourdrinier machines and subsequently coated should replace wherever possible uncoated stock made on board machines. Not only would less fibre need to be used for the production of a board of a quality and strength equal to uncoated board, but the coating would provide additional protection to the poor grades of uncoated board now used. Coating materials are almost entirely made in Britain and the coating mills could handle each week, 1,500 tons more than their present output. If this quantity replaced uncoated pulp board, the savings in fibre would amount to 250 tons a week. Systematic collection of waste wood, wood shavings, etc., for paper making is also likely to be adopted. In timber-using localities, such as the furniture manufacturing centres, such large quantities of waste wood are produced that even the heating systems specially designed to utilise the materials could not prevent enormous stocks accumulating. Another rather more impracticable scheme is that daily papers should be sold on return of the previous day's copy.

Meanwhile, the concentration of the paper, box and carton industries is progressing and there are no more young men left in many of the factories. Previously they were reserved from an early age, but a much more rigid reservation scheme has been introduced, so that only absolutely essential key men can be retained, the remainder to be succeeded by women workers. Concentration is also being applied in the tinplate industry and in the glass, bottling and the pottery industries.

Plastics supplies are as strictly controlled as ever, but there have been one or two interesting trade developments. One has been the introduction of a new metal coating process which ensured that when a metal coating for synthetic resin products is required, the metal particles join with the synthetic resin particles and therefore strengthen the surface of the moulded or laminated article considerably. This process, which has been introduced by Plastic Spray, Ltd., London, is suitable not only for moulded articles but can be used for cast resin products, laminated and also cellulose products. By its use, the replacement of metal cases, etc., with metal-coated, moulded ones can now be satisfactorily achieved and the advance in technique should have a permanent place in the electrical industry after the war. Another interesting plastics development is the introduction by the Ministry of Labour of special training courses in plastics work, at government training centres. Already men of such diverse ages as 16 and 40 years and callings, such as porters, fishmongers and musicians have been successfully trained in various branches of plastic mould making and have been able to meet, to some degree, the greatly increased demand for skilled labour due to the abnormal expansion of the plastics industry. Then again, owing to the shortage of metal and casein, more and more firms are now producing men's trouser buttons in synthetic moulded buttons. (*Continued on page 102*)

. . . CHALLENGE ACCEPTED

The gauntlet has been hurled . . . A fighting America has accepted the challenge. We did not start this war, but it is the job of *each and every one of us* to make certain that America finishes it—*right!* Even selfishly, all we have to give is the very least we can give.

Our business is Adhesives—gums, glues, pastes for over 100 different industries and for many private uses. Adhesives are not gunpowder—nor armorplate. Yet they play their parts—both directly and indirectly—in many lines of war and defense.

Whatever may be required of us—in production facilities, factory space or man power—by our Government or by those supplying our Government—we will deliver to our utmost.

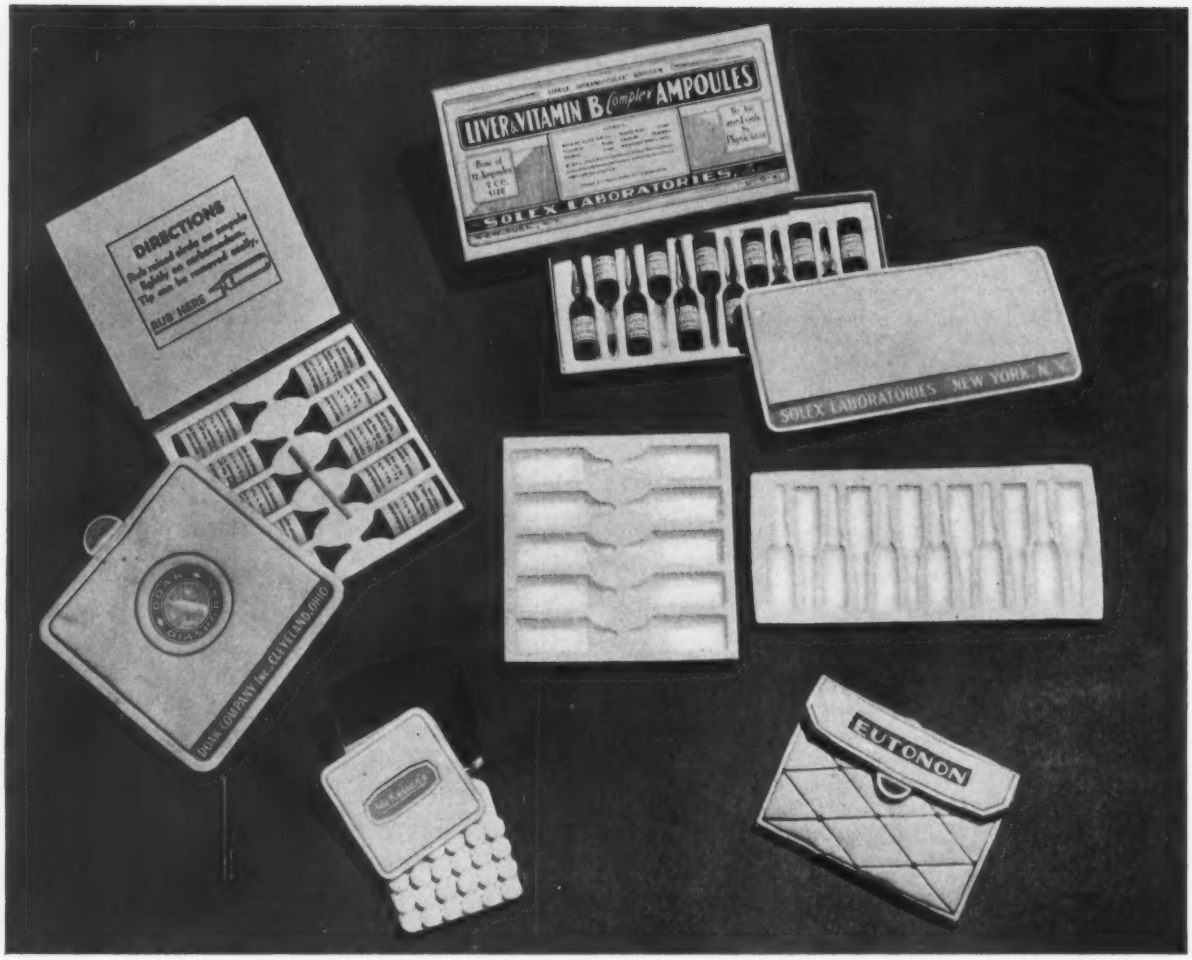
In addition, we are happy to go on record with the fact that 100% of our organization—in all our offices, laboratories and factories—are owners of United States Defense Stamps or Bonds.

To those of our customers who are not directly engaged in war or defense work . . . We know that America will win this fight. We know well that we will always need and value your patronage—as we have in the past, as we do today. We ask your patience, when and if we cannot always fill *over night* each and every one of the 9,000 adhesive formulae on file in our laboratories.

THE ARABOL MANUFACTURING CO.

PIONEERING SINCE 1885

NEW YORK • BROOKLYN • CHICAGO • SAN FRANCISCO



Protection of expensive pharmaceuticals in glass ampoules as well as medicinal tablets which break easily in shipment is ever a difficult packaging problem. Several manufacturers have found a solution with these efficient new cellulose molds and pads.

Cellulose wadding molds and pads

A new type of molded and embossed cellulose wadding which offers efficient protection and very attractive trade identity has been adopted by a number of pharmaceutical houses for packing ampoules, tablets and other small ethical products.

As shown in the illustration, this new material is made from layers of absorbent cellulose wadding. By a special process recently introduced in this country, this wadding is molded into a protective inner container which provides an individual place for each ampoule with each impression made exactly in the shape of the ampoule. Containers of this type are made in exact sizes to fit the requirements of the box used as the complete package unit and may be designed to hold as many ampoules as required. The individual places for the ampoules may be molded so that the ampoule tips are arranged alternately with the bases to fit an oblong box or in two uniform rows for a square box.

Protective pads have been designed to fit over the tops of the containers inside the boxes. These pads are embossed and printed in one color in one operation. This embossing and printing make possible many interesting and unusual effects for additional product and trade identification. These pads are used also inside of metal and paper boxes to protect tablets which might be easily broken in shipping. This use is shown in the illustration of the McKesson package.

Another interesting adaptation of this material is illustrated by the Eutonon packet. This is made entirely in one piece. The reserve part of it, not visible in the photograph, is molded to contain several ampoules while the other part, embossed and printed, folds over the molded part and may be secured by a slot and flap. This type packet makes a very attractive unit when enclosed in a box as a complete package.

Credit: Molded containers and protective pads by Cellulose Wadding Products, Inc., Division of The General Cellulose Co., Inc.

LITTLE THINGS THAT MADE A BIG DIFFERENCE

The forming of the stitch with the aid of a shuttle was the principal innovation incorporated in the first successful sewing machine built by Elias Howe in 1844.

THE development of a liner which vents under pressure is a CCS innovation which has solved a troublesome problem for packers of products that generate gas.

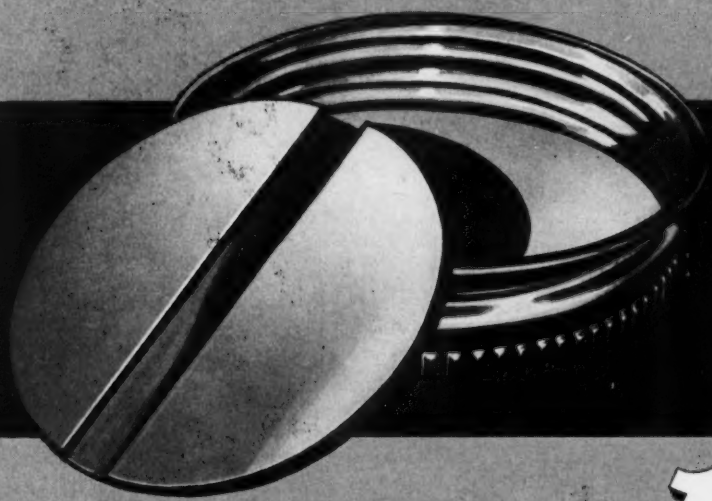
Used in Crown Vent Screw Caps, this liner vents at comparatively low pressure during the shelf-life of the product, thereby reducing the possibility of any liquid being "blown" upon the customer when the container is first opened.

CROWN'S PART IN DEFENSE
Building tripod mounts for anti-aircraft guns.

You pay no premium price for Crown Vent Liners!
Samples, prices and complete information will be sent to you promptly without obligation. Write today.

CROWN CORK AND SEAL COMPANY, BALTIMORE, MD.
World's Largest Makers of Closures for Glass Containers

VENT CAPS



One of the 7 Closure Improvements CROWN brought you **1st.**

Merchandise on cards

Tests have proved that a small card, properly embellished with color to attract attention to the product, accounts for an ever-increasing distribution and sale of millions of pieces of small merchandise for hundreds of consumer products. It is a unique combination of effective packaging and excellent display advertising for small units.

Most manufacturers who produce products which are small in size and are sold through the chain stores or even on the counters of regular department stores, find the use of attractively colored cards in retailing these items to be almost indispensable. They have found that this method is a most convenient and economical form of combination packaging and display advertising. The use of cards also saves untold dollars because of the fact that pilfering is reduced by 60 per cent, according to the statements of a number of users. Experience has shown that a small piece of merchandise securely attached to a merchandise card cannot be stolen easily from the counter or removed from the store.

In selling through merchandise cards, the product is presented in the open. The consumer can feel it, examine it and be sold by its beauty or utility. The product is given every possible opportunity to sell itself. Thus a merchandise card can do a very complete selling job. It creates interest, stimulates the desire to buy and, backed by the quality of the product itself, completes the sale.

For the retailer carded merchandise has tremendous advantages. It may be arranged neatly on counters and can be kept that way with a minimum of effort by sales people. It may be handled quickly and efficiently for sales because each item is kept separate and does not have to be disentangled from a jumble of similar items by the sales girl or the customer. Articles which might appear drab without some means of distinguishing each piece become individualized and interesting against a brightly colored card.

These cards have been most successfully used for personal products such as cosmetics, hairpins, curlers, razor blades, shoe laces, etc., and for a variety of household items. Kitchenware of many types gains added sales value and customer appeal through carding. The managers of household departments of large stores find that carded merchandise brightens up these strictly utilitarian sections of the store and that such merchandise can be arranged in a multitude of eye-catching displays.

Credit: Cards by Stecher-Traung Lithograph Corp.

Worth looking into!

Whatever will fill *your* pockets with cash is certainly worth looking into!

To you this means packaging your products in *glass*. For, as a result of many *new* developments, Anchor Hocking glass containers *today* offer you a host of sales-stimulating features. In addition, Anchor Hocking gives you—at *no extra cost*—the *extra* advantages of Anchor Hocking experience and facilities. Its specialists...in design, engineering, biological and chemical research...know packaging from every angle. They are at your service, to provide first-rate technical assistance, new packaging ideas, containers and closures designed to better sell and better seal your products.

No matter what your requirements—the complete package, the containers alone or the closures alone—it will pay you to call in your friendly Anchor Hocking packaging engineer.

☆ ☆ ☆ ☆

Worth Looking Into! The Anchor Hocking Wide Mouth Round

This splendid container—the Anchor Hocking 6500 Wide Mouth Round—is a honey for dry chemicals, powders and a variety of other products. Easy and swift to fill...contents highly accessible. Generous labeling space. Available in amber or crystal...21 sizes, from 3 cc. to 950 cc.

The Anchor Improved C. T. Cap...Pitch of cap thread and container thread matches throughout their entire length, gives tighter seal. No interference between cap and container threads—cap spins off or on easily. Fine knurls, cylindrical side walls and neatly turned wire edge provide better appearance.

The Anchor Amerseal Cap...Its equally spaced lugs engage under side of glass container lugs, draw cap down, compress liner in tight, even, *complete* contact with container finish. No thread matching, as in screw caps. A quarter turn and its off or on. Will not corrode, rust, gum or freeze to container finish.

ANCHOR HOCKING

GLASS & CAPS

ANCHOR HOCKING GLASS CORPORATION • LANCASTER, OHIO

U. S. patent digest

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 10 cents each.

CONTAINER CLOSURE. J. K. Harrison (to Socony Vacuum Oil Co., Inc., New York, N. Y.). U. S. 2,261,621, Nov. 4. A container consisting of a paper or plastic-lined component with an end closure including a fibrous portion consisting of multiple paper sheets bonded together with the surrounding edges annularly unattached. An impervious sheet laminated and secured by a moisture-proof adhesive to the inner face with the annular edge portion unattached, the end closure being frusto-conical in shape with the smaller positioned inward. The plastic extends inward between the unattached edge portions of the paper sheets.

DESTRUCTIBLE CONTAINER. D. S. Lakewood (to Dobeckmun Corp., Cleveland, Ohio). U. S. Re: 21,945, Nov. 11. A destructible oil-proof container formed of spirally wound heavy paper stock and an inner oil-proof lining of a sheet of oil-resistant material laminated to a thin paper backing. The composite sheet is wound spirally with its adjacent edges overlapped and bonded to the inner body wall. The edge of the backing is enclosed in a reversely turned fold of the oil-proof material. The reverse fold is bonded to the face of the oil-proof sheet immediately adjacent thereto.

FOOD PACKAGE. J. S. Cummings (to Interchemical Corp., New York, N. Y.). U. S. 2,262,270, Nov. 11. A foodstuff container providing for inspection of the contents while protecting them from rancidity. The portion provided for inspection comprises a translucent sheet material consisting of transparent regenerated cellulose coated with a brushed lacquer film.

DISPLAY CONTAINER. E. C. Sloan, Geneva, Ill. U. S. 2,262,472, Nov. 11. A display container made up of body members which have wall portions open on one side, the openings being arranged in a plane bounded by margins of the wall portions pivotally connecting these members about an axis located adjacent to the margin. A wall is mounted in the container with its medial bottom portion secured at the axis of rotation. Both openings are disposed in a common plane and the wall is operative to dispose itself across both of said openings in overlying relationship when the members are shifted to the open position.

DISPLAY PACKAGE. C. H. Steinbiss (to Lyons-Magnus, Inc., San Francisco, Calif.). U. S. 2,263,524, Nov. 18. A combined shipping and display package consisting of a blank folded to provide end and side walls of a rectangular carton. A tray is telescopically received within the lower end of the carton and provides a bottom closure for same. A plurality of boxes for food displays are seated upright in these trays which are secured to the carton walls and can be quickly released. Back member provides display.

DEVICE FOR LINING CLOSURES. H. E. Gerlitzki (to Armstrong Cork Co., Lancaster, Pa.). U. S. 2,261,990, Nov. 11. A device for lining a screw-threaded closure having a concave inner head surface with a liner disc of a diameter greater than the inner diameter of the closure at the threads. The liner disc is positioned to be pressed into the central position to conform with the concave inner head surface of the closure permitting free and unrestricted deformation of such liner disc at its edge. A second pressing member has an annular pressing surface disposed about the inner pressing surface of the primary member.

FIBRE BOX. H. M. Inman, Aberdeen, S. D. U. S. 2,264,208, Nov. 25. A chick box comprising a body and lid of fibrous material and a longitudinal partition composed of two plies provided with elongated end portions. The plies are turned outward for engaging the inner sides of the ends of the body. The remaining parts of the ends of the plies form tongues which extend through the ends of the body. The longitudinal partition extends through the lid forming a handle for carrying the box and to combine with the T-shaped extensions and projecting portions to support a superimposed box.

PACKAGING. C. J. Delegard, Chicago, Ill. U. S. 2,261,344, Nov. 4. A packaging machine consisting of means for rotating a cylindrical article with peripheral wrapping means and a second peripheral wrapping means for positioning strips of material around each end of the wrapped article. Means are provided for positioning an end cover and subsequently crimping the projecting edge portion over the end cover.

METHOD OF PACKAGING. W. A. Schoen (to Milprint, Inc., Milwaukee, Wis.). U. S. 2,262,256, Nov. 11. A method of packaging disc-like articles by superimposing a transparent sheet having a heat fusible surface on a relatively stiff sheet with an opening therein. Disc-like objects are positioned on the transparent sheet above the opening in the stiff sheet, placing a backing sheet on the positioned object and applying heat and pressure around the objects to unite the sheets and confine the objects in position.

PACKAGING MACHINE. E. W. Singer (to Beech-Nut Packing Co., Canajoharie, N. Y.). U. S. 2,263,250, Nov. 18. A machine for packing articles in boxes, each box having a closure flap to be folded into the edge of a side wall of the box when the box is filled. A device is attached for feeding articles into each box which is arranged side by side. It contains detecting means acting automatically to bend the edge of the side wall inward preventing folding in of the flap by the flap folding device.

METHOD OF FILLING BOTTLE CARRIERS. A. Wesselman, Cincinnati, Ohio. U. S. 2,263,411, Nov. 18. A method of filling a collapsible bottle carrier which is initially in flat formation with opposed sides, opposed apertured tops and scored bottom halves disposed flatwise against each other. The method comprises striking the scored edges of the bottom halves against a support separating the sides and tops. The bottles are inserted at the ends of the carrier followed by insertion of intermediate bottles.

CARTON LOADING MACHINE. R. A. Jones (to R. A. Jones & Co., Covington, Ky.) U. S. 2,263,501, Nov. 18. A carton loading machine consisting of a pair of horizontal endless conveyors with the loading region arranged close to a direct transfer of merchandise carried by one conveyor into cartons carried by the other conveyor. The merchandise to be inserted in the carton is moved in unison and in edgewise alignment with the carton to effect a transfer by relative transverse movement to the direction of the conveyor travel.

PACKAGING APPARATUS. A. G. Rose (to Rose Bros., Ltd., Gainsborough, England). U. S. 2,263,739, Nov. 25. A device consisting of a pair of controlling members arranged to engage and maintain the folded condition of the upper flaps of containers during their transfer from a folding and glueing unit to a conveyor. The conveyor carries an upper belt section provided with an inclined portion adjacent to the controlling members with guiding means adapted to engage these members.

GIVE YOUR PRODUCT A BETTER CHANCE TO BRING YOU A PROFIT

WHETHER you manufacture candy or cakes, chemicals or grease, hardware or tobacco, food or drugs, there is a Heekin Can . . . unique in design or conservative and dignified that should give your product a better chance to bring you a profit. Heekin craftsmen are expert lithographers of colors on metal . . . that's why Heekin Cans have truer colors . . . lasting colors. Yet Heekin Lithographed Containers are inexpensive when compared to the beauty they bring to your product. Why not talk your packaging problems over with one of us?

THE HEEKIN CAN CO., CINCINNATI, OHIO

Heekin Cans

Lithographed

WITH HARMONIZED COLORS

2 *Bright Ideas*

TO BEAT THE BOARD SHORTAGE

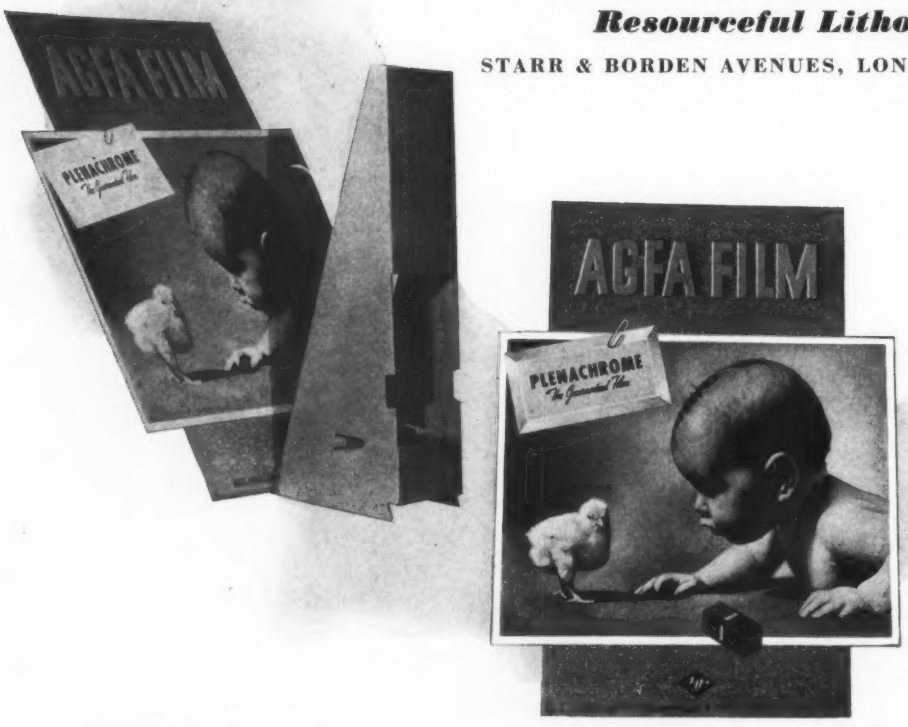
UNCLE SAM has the priority on pulp and paper board this year . . . and there isn't going to be enough board to go 'round. There are no restrictions on ideas, however, and Einson-Freeman makes brains take the place of board.

We offer herewith two patented constructions that are not only board savers, but weight savers and money savers as well. The "Two-faced" and "Skeleton Mount" will enable you to get your full quota of displays, despite the board shortage, and at no increase in cost . . . And if Einson-Freeman produces them, you know that they will be better than average! . . . Details on request.

EINSON-FREEMAN CO., Inc.

Resourceful Lithographers

STARR & BORDEN AVENUES, LONG ISLAND CITY, N. Y.



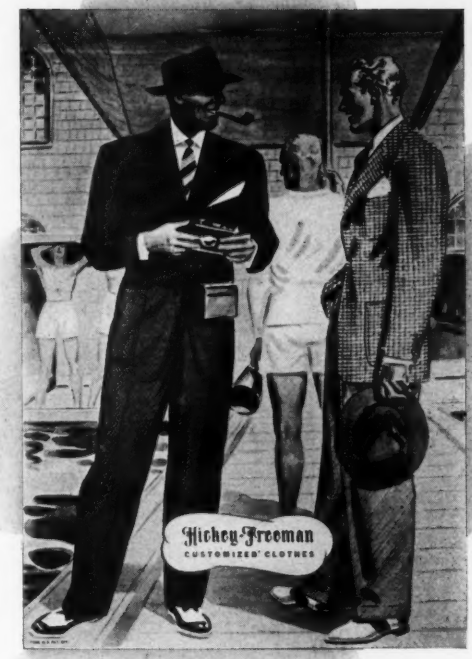
"Skeleton Mount" *(right)*

On the surface, it's a conventional display unit . . . but the poster is printed on regular paper stock, mounted on two strips of board, top and bottom. Merely setting up the easel creates tension, keeps the paper panel smooth at all times. It comes in one piece and folds in either two or three sections for shipping.

The Einson-Freeman "Skeleton Mount" shows a 14% saving on finishing, permits a 42% saving on shipping containers, has 44% less weight which means correspondingly lower costs in shipping.

"Skeleton Mount" can carry any kind of subject matter, is available in any size. Takes less space in salesmen's cars. Requires no assembly; simply unfold and set up the easel . . . Samples are ready when you are!

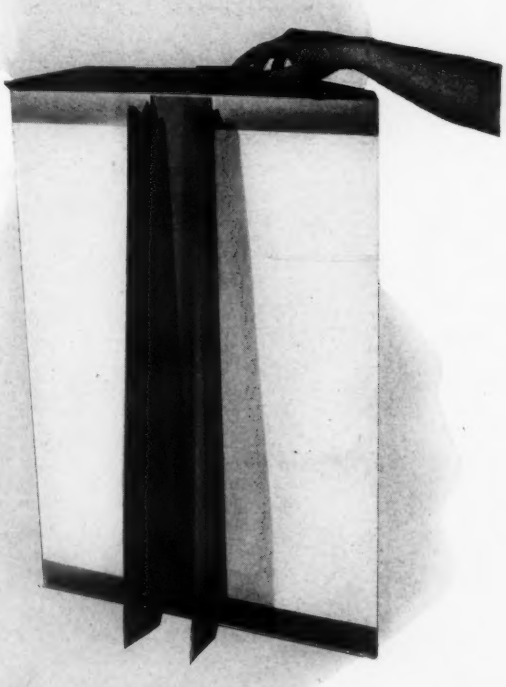
Patents applied for by Einson-Freeman Co., Inc. and Richard E. Paige.

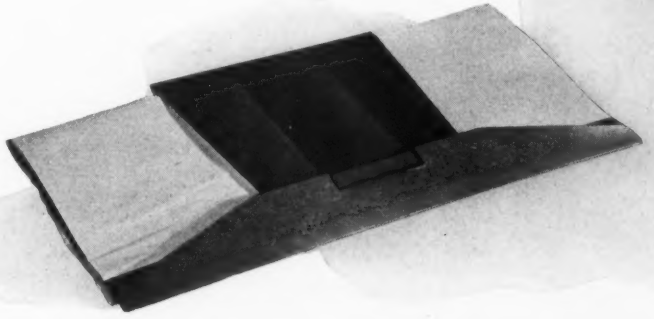


"Two-Faced" *(left)*

is a display panel printed on *both* sides and hinged to the easel at the bottom. After one face has been displayed, simply turn it over and expose the other side.

This double-barrelled unit affords display for the special occasion and general utility, Mother's Day and any day; for use through two periods, such as Christmas and the New Year; for featuring a deal on one side and the line on the other . . . You buy one display, but get two, with longer life, increased utility. The extra cost is slight for the extra value. Patented by Einson-Freeman Co., Inc.





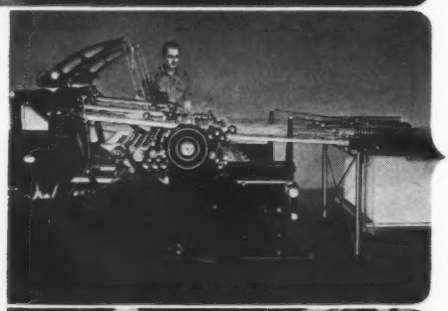
BUSINESS TROUBLES?

MAYBE, BUT PROTECT THIS GUARANTEE OF YOUR PRODUCT!

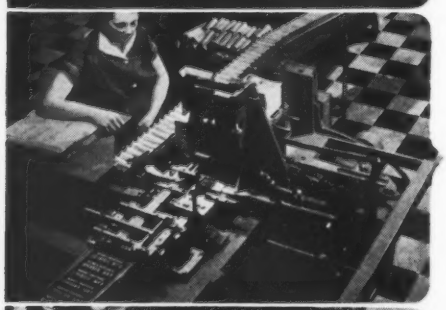
If you are a user of folding cartons today you are supporting an investment worth thinking about—this common type of product carrier does many things so well.

It begins with

PAPER BOARD MILLS like the one making Ridgelo clay coated boxboard which place their time, knowledge and facilities at your service so that . . .



CONVERTERS using large quantities of power, machinery and labor may turn plain paper board into multi-colored, many shaped containers that are sold to . . .



USERS like you who require more human hands, and even more intricate machines to transfer these cartons into individual, distinctive units ready for . . .

THE CONSUMER who always finds your product exactly as represented because the carton is the one unchanging link in the chain of appeals confronting him. It is the guarantee of your product's integrity—any time—everywhere.

So it's good judgment to be sure of the best cartons . . that means RIDGELO CLAY COATED BOXBOARD *for your fine folding boxes.*

CONTRIBUTING MEMBER ★ WASTE PAPER CONSERVATION CAMPAIGN ★ ★ FOR NATIONAL DEFENSE

Ridgelo CLAY COATED BOXBOARD

★

MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

Millions of impressions can become sales

*by James J. Jacobson**

The function of advertising is to move the customer toward the product. The function of sales promotion is to move the product toward the customer. Only through coordinating these efforts is a complete advertising job done.

Millions of impressions are created in magazine, newspaper, outdoor and radio advertising under terrific competition for attention and far from the point of purchase. Some of these impressions are turned into resolutions to buy often enough to result in what is considered successful advertising. Many more impressions are only half resolves which never become actual sales, because advertising doesn't quite complete the job. These are the ones that point-of-sale promotion can get at little cost, compared with original advertising cost.

Since an advertising agency is a crossroad of ideas for its clients, it would seem that a large part of a client's merchandising and sales promotion plans should originate with or be produced in cooperation with the agency when the client's advertising campaign is being formulated. In this way, each could be made to supplement the other.

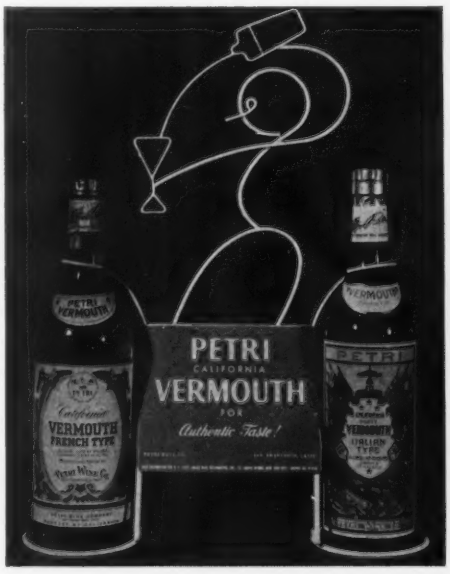
* Director of Sales Promotion, Erwin, Wasey & Co.

What has usually happened in the past was quite the reverse. The result was a mad, last-minute scramble to put together the semblance of a "dealer cooperation" program. This occurred despite knowledge that many good advertising campaigns were ineffective simply because sales people in retail outlets were not given the proper training or sales tools to make the product succeed. Wrong packaging, improper display or none at all, lack of understanding of retailing or the importance of dealer cooperation have all been definite reasons for the high cost of turnover.

Nothing has been kicked around in advertising agencies so much as sales promotion, because "promotion" involves a departure from agency routine in which the average agency man hesitates to become involved. The reason is simple. Sales promotion is concerned with an assortment of actual materials—sales plans, displays, signs, broadsides and other aids—which have to be specially designed, manufactured and put into use, often in large quantity. It takes a highly specialized kind of experience to create practical selling ideas and to assume the risks and problems which a capable pro-

1. "Maxie the Mixer" is the nickname for this wire mannequin, symbolizing Petri Vermouth. The pilferproof counter display is desirable for its adaptability to a large variety of locations and shows up well against almost any background. 2. This mass display for Petri wine allows full play of light around the bottles and thus reveals the beautiful color of the wine. Pilfer proof, it gets a location not often given to this type of product. 3. The customer learns in a jiffy the uses for Duplex Dog Dresser from this arresting demonstrator display with a piece of fur fastened to a wire dog which tells the sales story in a few seconds.

1



2

3

motion man takes in his stride to carry out a full-fledged promotional effort. The attitude in agencies, thus, has been to regard the tools of sales promotion more or less in the category of gadgetry, with little basic sales reasoning behind them.

During the last five years, however, a great change has been taking place. Outstanding advertisers have been giving increasingly more attention to point-of-sale promotion. Many of the top-flight spenders of advertising money have learned that space in newspapers and magazines and time over the air is not enough. They know this advertising must be followed through with a complete sales promotion program that ties in with the point-of-sale, if they are to get the most from their advertising dollars. Nearly all of these advertisers have developed highly specialized promotion departments of their own to work in cooperation with advertising departments.

The modern advertising agency is also giving more recognition to this phase of its activities. Several now include specialized sales promotion departments as a regular part of their agency service. In agencies with such a setup, the same quality of specialized creative talent originating advertisements is also applied to the creation of sales promotion ideas.

Consumer reaction known as "impulse buying" is one of the big reasons for projecting advertising to the point of sale. How often have you bought something in addition to the article you intended to buy because you saw it displayed? In displays on counters or in windows, the opportunity to sell usually arises in seconds of time. The precise moment the display arrests attention is one of complete relaxation from selling as far as that product is concerned and the strength of the buying impulse is determined by the effectiveness with which the display catches and holds interest.

Since people of all ages and income groups patronize stores, it seems strange that a medium of such great diversification and mass coverage as point of sale, which acts as the final reminder to revive all other impressions at a place where the product can be handled and purchased, should be neglected.

The first step an advertiser takes to approach his market is to set up a unit of sale by packaging his product. The strict limitations of packaging technique make this first step critical. It requires the utmost thought and creative ability to incorporate into the package those added elements of showmanship and convenience which largely determine the amount of display dealers will give a product.

The second step involves securing distribution by setting up marketing arrangements with wholesalers, distributors or jobbers. At this point the advertiser's sales organization is invariably met with the question, "How are you going to merchandise it?" The question really means, "What selling tools are you going to furnish to accelerate movement of the goods, such as display containers, counter displays, racks, signs, window displays, broadsides and other aids?" The question also has a far deeper significance because sales promotion does not confine itself merely to point-of-sale displays and packages. It means, in concise definition, ideas which accelerate the movement of merchandise from manufacturer to consumer through the various steps involved in distribution. These ideas must be the product of keen analysis and expert rationalization of the sales and distribution problems peculiar to each business and industry.

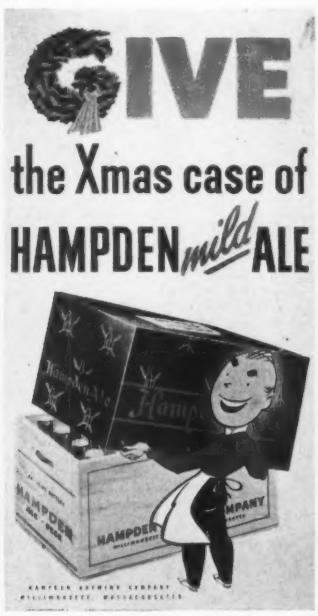
Let's follow one of the simplest of typical problems in the sales promotion department of a large advertising agency. A client on the West Coast, the Petri Wine Co., which has achieved successful distribution of its product, realizes the necessity of point-of-sale follow-through for its advertising. A brief survey of display in wine retailing disclosed that:

1. Wine displays usually take up too much room.

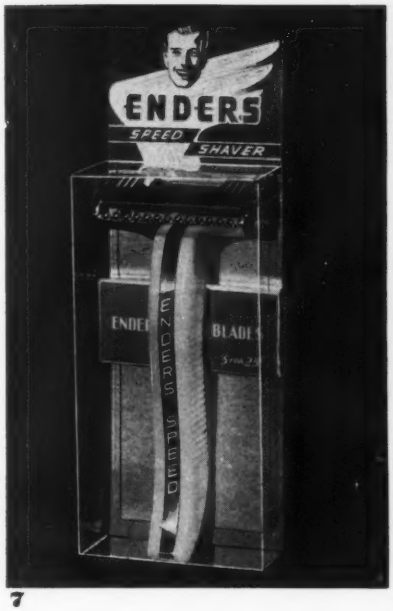
4 and 5. Hampton Ale encouraged Christmas sales for ale by using decorative Christmas-wrapped cases, backed up by Criterion posters like the one illustrated. Dealers could pile up the cases to use the ledges for the display of other merchandise. 6. Calvert's lamps used in bars and restaurants literally highlight the package and at the same time tie it in with the company's advertising theme at the point of sale with added utility feature for the dealer.

4

5



6



7

8

9

7. This new package is a combination of a tuck-in box of transparent plastic sheeting with a die-cut gold foil embossed card. The product is protected against exposure and contamination, while a full view of its sales points are visible. An additional selling aid is a sales story printed on the back of the card. May be used for single or multiple display. 8 and 9. These simple, inexpensive racks enable cigar manufacturers to get their brands well displayed by use of the well-identified box covers in preferred positions placed at an inviting "pick-up" angle where they occupy a minimum of space on the counter.

2. Bottle displays are subject to pilferage.

3. Wine displays often tend to concentrate interest in the display material instead of the merchandise.

4. Wine displays are not flexible enough to give retailers a choice of position, such as counters, windows and floors.

The development of an idea to fit this situation resulted in the pilfer-proof bottle display unit which is illustrated in this article. It provides striking advantages for the client's sales organization. The simple construction and use of this display piece give each salesman a merchandising tool to talk about with enthusiasm. Retailers instantly recognize the advantages for themselves in this display and wholeheartedly accept and use them. The consumer sees this well-advertised wine given mass treatment in a preferred store position, every bottle separated to catch and hold light—the beautiful colors of the wine brought out to emphasize appetite appeal, without interference from competing brands. This simple display idea is an exclusive tool for a thorough promotional job that follows through to the point of sale.

Salesmen, missionary men, dealers and clerks must be taught how to use these selling tools in the special and ingenious form in which they are made for a product or the expenditure for such selling aids falls far short of obtaining maximum effectiveness. This kind of teaching is one of the most important phases of sales promotion. It is subtly accomplished by planning each part of a promotion to provide a dramatic, conversational approach for the salesman, dealer or clerk, plus an exciting appeal to the consumer.

For example, a whiskey salesmen pulls out of his pocket a stirring rod made in the form of a thermometer and shows a bartender that a whiskey collins is exactly 42 degrees cold every time it is served. From this point of common interest a promotion is built that provides the dealer with a summer window card announcing it is "42 degrees cooler inside—a whiskey collins," accompanied by inside store posters, streamers and other material to carry on the idea. This promotion originated in the advertising for this client which features whiskey collins during the hot summer months. It is obvious from this example that concurrent with the advertising, the salesman, the dealer and the customer have been given easily understandable parts in promoting the product.

When planned sales promotion work of this kind is integrated with regular agency service, it often provides all the materials needed by manufacturers' and wholesalers' salesmen to cover months and seasons of selling activity. It takes the usual forms which provide maximum sales training and involves the creation of presentation material of all types, such as sales kits, portfolios, direct mail, broadsides, sound films and a wide variety of ideas for dealer and wholesaler approach, designed to fit all kinds of conditions. The contribution of this service, in addition to the creation of window displays, counter displays and packages, adds wider scope to advertising agency service. Marketing needs first arise in the field and can best be sensed by the experienced sales and advertising executives in the advertiser's own company. These people, naturally, are most familiar with the business. Such executives ought to spend as much time as possible on the firing line, close to their sales operations and in actual contact with their dealers and salesmen where selling and merchandising problems most often arise. If they are burdened with the whole job of translating problems into constructive ideas, the results all too frequently suffer from snap judgment and inconsistencies with the general merchandising and advertising pattern.

Credit: Wire displays fabricated by Manhattan Wire Goods Co. Lithography, Hampden Ale wrap, by James Gray, Inc. Razor display box by Everett Transparent Container Co. Foil cards by Cameo Die & Label Co.

1

2

DISPLAY

1 Fleischmann's window unit features the new product leaders of the company's brands—Bond, Preferred Blended Whiskey and Gin—"The 3 Champions of Quality and Shielded Flavor." The center panel recalls the well-known Three Musketeers of fiction, striking a familiar, dramatic pose. The circular design for the bottles on the centerpiece is removable and may be hung separately. The two side pieces with full-color lithographed pictures of bottles may also be used individually for counters and backbars. Made by Continental Lithograph Corp.

3

2 The story of fluorescent lighting is presented quickly and forcibly by this display for G-E. Two real fluorescent lamps are shown in a manner which immediately lets the shopper know that the dealer carries these lamps. The long one is held by the die-cut hands of the lithographed figure; the shorter is held in place by a special construction which permits the dealer to illuminate the lamp when it is on display. Made by Forbes Lithograph Mfg. Co.

3 This smiling State of Maine farmer boy may hold a sack or a mound of real potatoes in his lap. The display is lithographed in full color and is three-dimensional in effect. The realistic crate shows how carefully the potatoes are packed for shipment and suggests the excellent quality of Maine's product. A balloon with the slogan, "As only Maine can grow 'em," gives further animation to the display. Made by Einson-Freeman Co., Inc.

4

4 Briggs display carton and outer packer represent the tobacco company's popular combination sales unit, consisting of an 8-oz. "lev-a-lift" style humidor and a Rogers' Onliwon latex tobacco pouch. Humidor fits into a die-cut hole and the pouch is attached to a cardboard strip which is fastened into slots on the carton. A diagram on the back shows dealer how to set up display piece. The wood-grain design, printed directly on the cardboard, gives the carton a durable appearance. Display carton by F. N. Burt Co., Inc.

5

CIGARETTES
Luckies are milder, better-tasting!
—they pay the price to get the finer, lighter, naturally milder tobaccos.
WITH MEN WHO KNOW TOBACCO BEST — IT'S LUCKIES 2 TO 1

6

GALLERY

5 Richard Hudnut creates this window display for its Valentine perfume in clever boxes that look like invitations. The centerpiece is two giant-size hearts. A heart-shaped card, trimmed with paper lace, carries brand and product names and draws the shopper's attention to the fact that the perfume is boxed for mailing. A bright red band also shaped like a heart serves to frame a bottle of perfume which rests on a tiny, heart-shaped sachet attached to a white card. The outside carton used for mailing is shown as part of the display.

6 Latest in the Lucky Strike poster series is this typical American girl, pictured against a huge tobacco leaf. The poster ties in effectively with the company's entire advertising campaign which stresses the fine quality of tobacco used in its cigarettes. A giant-size illustration of a package of Lucky Strike cigarettes stands out in the foreground and forcefully recalls the packaged product to the consumer. Made by The U. S. Printing & Lithograph Co.

7 The "good-neighbor" policy was the theme of this "Get More Out of Life with Coffee" display used by L. V. Eberhard, supermarket owner, Grand Rapids, Mich., in lining up his sale of Del Monte glass-packed coffee with the promotional campaign conducted by the Pan-American Coffee Bureau. Flags of the Americas decorated the mass display and a hostess, "Miss Good Neighbor," dressed in lace and traditional *mantilla*, presided over the sale.

7

8 The part that paint played in the restoration of Colonial Williamsburg is suggested by the large open book which Pittsburgh Plate Glass Co. uses as a display for its Wallhide paints. The book is a single fold size 31½ by 45 in., mounted to heavy board. Each side is supported by an easel at the back. Illustrations of both interiors and exteriors in houses in Williamsburg are done in water color. The book has metallic corner pieces for protection. Display by Kindred, MacLean & Co., Inc.

8

(*Page 73*)

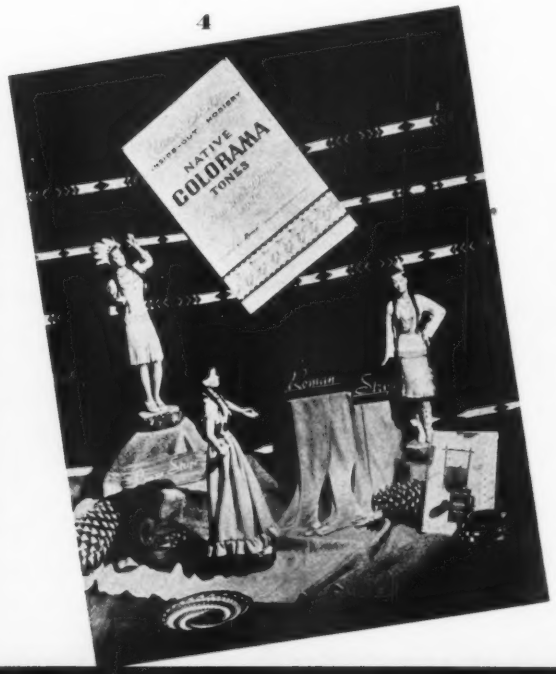
Dolls prove the power of miniature

*by Mary C. Tucker**

1

2

3



4

Sheer stockings on a pair of pretty legs draw many an admiring glance, but it takes more than a window full of unoccupied stockings, however sheer, to draw traffic into a hosiery department of a store.

Two years ago we found that stores carrying our Roman Stripe hosiery were devoting their window space to merchandise blessed with greater appeal, while our stockings remained meekly folded in their boxes or modestly draped on the hosiery counter in unassuming fashion.

Why weren't we getting the colorful, dramatic, day-in-day-out visual appeal we wanted for our stockings? What could we do that would impel stores to act on our window suggestions? We reviewed all our past efforts. We discussed all kinds of display materials. After going over everything, we decided that everybody was intrigued by miniatures. How could we adapt the miniature idea for our products? Finally, we decided on dolls—sleek, sophisticated, miniature mannequins—23 inches of well-sculptured allure to personalize Roman Stripe hosiery and to dramatize its story from store to store.

The result was far beyond our expectations. Department stores which had been notoriously lukewarm on the subject of using their windows for hosiery displays were immediately anxious to give our "tiny sales girls" a star billing in them. In one year the use of the dolls increased the number of stores featuring our stockings in windows by about 350 per cent.

Hosiery colors, strange though it may seem, aren't drawn blindly from a hat, but are created anew each season and are

* Advertising Manager, Roman Stripe Mills.

On this page are illustrations of the basic window display material and suggested arrangements sent to department stores by Roman Stripe Mills for their four doll promotions of hosiery. 1. Dancing Colors. 2. American Bouquet Colors. 3. Tropical Travelogue. 4. Native Colorama Tones.

carefully keyed to prevailing fabrics and leathers for complete costume harmony. Like many hosiery companies, we prepare for the hosiery sales-girls' use a "Color Coordination Book," a complete and authoritative answer to the ever-present, what-to-wear-with-what question. "Dancing Colors" was the theme under which the color story had been developed, so we selected three colors—"Minuet," "Gypsy Coin" and "Zomba"—and dressed the dolls to dramatize these names. To keep the display flexible, we added only basic pieces, such as a background sign (which was a blow-up of the cover of the Color Coordination Book), the Color Coordination Book itself, individual display cards showing actual swatches of the three featured shades together with swatches of harmonizing shades of fabrics and leathers and a plastic name sign. Sturdy shipping cases were built to assure the little ladies safe conduct and complete instructions for handling were mounted in the cases. After we had taken these precautions, the traveling displays were ready to ride.

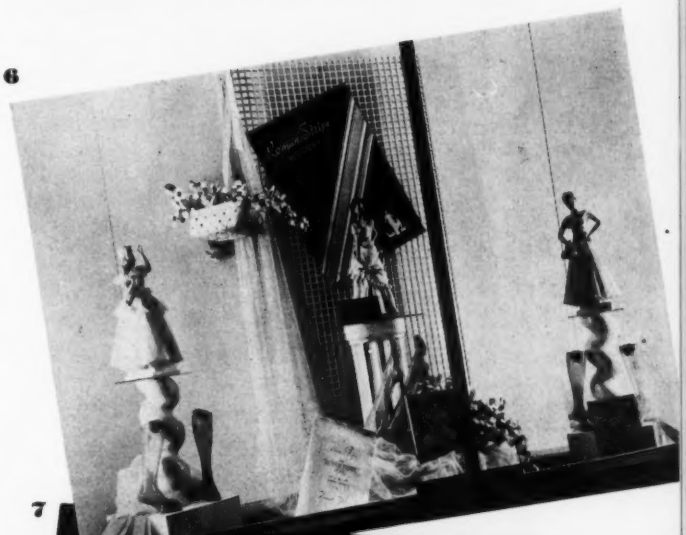
Our salesmen actually booked the displays and the scheduled dates were confirmed with the hosiery buyer, display manager and advertising department of the store before a display was shipped. We allowed one week between showings for shipment to the next destination and, while maintaining the schedules required constant checking, letters, telegrams and phone calls somehow kept the displays moving according to schedule and mishaps were happily few. During the four-month display season (September through December), the six traveling sets were prominently featured in 44 stores, which meant as many display weeks for our hosiery. This number was considerably greater than we had been able to promote with less elaborate display helps. And, while the initial expense of the traveling displays was much greater, the number of appearances brought the cost per window down to a gratifying minimum. At the close of the season we had a waiting list for the next season's display.

The following spring the dolls dramatized the theme, "American Bouquet Colors." In delicate pastel costumes, "Arbutus," "Dogwood" and "Orange Blossom" completed a very busy season with 47 display weeks to their credit and our advantage. In their third season, "Moon Maiden," "Wampum" and "Buckskin" staged a successful week's

Such imaginative material won unprecedented window space. These photos, selected from hundreds, illustrate how stores all over the country used their own imagination to dramatize further the basic material. 5. Russeks, Detroit. 6. Titche Goettinger, Dallas. 7. D. W. Adams, Augusta, Maine. 8. Rollmans, Cincinnati, Ohio.

5

6



7

8

9

10

11

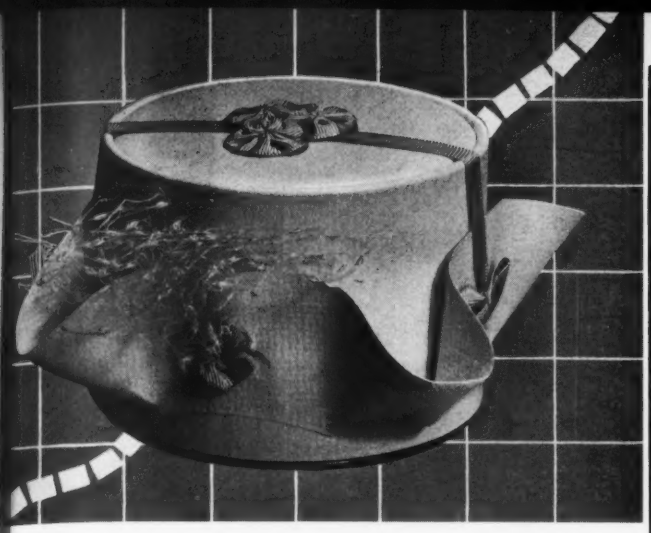
performance under the "Native Colorama Tones" theme in each of 40 stores. These three little Indian maidens made a special visit on our Christmas card, bearing good wishes to their friends among the hosiery buyers, display managers and advertising departments in stores where they had appeared earlier. Last season our versatile little players, still greatly in demand, spread the story of Roman Stripe's "Tropical Travelogue Tones" to 43 stores—all they could squeeze into their crowded itineraries.

Probably the most interesting fact about these displays is the way stores have taken basic, prepared material and, by adding their own special material, have developed window displays that are utterly individual and completely in keeping with the store's own display preferences and policies. Many stores have written us describing their windows and listing the outside material they have obtained to tie in with the color theme. The "Native Colorama" promotion afforded a particular incentive to display managers who borrowed museum pieces of authentic Indian art, unearthed their own prized relics and even begged, borrowed or persuaded the famous cigar store Indian to enhance their "Native Colorama" displays. We were also delighted to note that display managers, while building up the attraction power of the mannequin displays, never overlooked the primary consideration of merchandise and thus maintained the balance of selling power by a liberal display of hosiery, both draped and in our hosiery package.

For the last two seasons, we've offered prizes to the display managers developing the best windows, but, even without the prize incentive, stores have taken great pride in interpreting the theme and mood of the displays as effectively as possible. Many have asked to continue the display a second week. Some have borrowed it later when developing a similar theme of their own. All have recognized the attraction value of our pint-size mannequins and have proved their selling power in hosiery window displays.

Since miniature mannequins have multiplied our display circulation several hundredfold at a ridiculously low cost per display, there is small wonder that we are doll-minded in working up our displays. One of our most successful individual store promotions was developed to merchandise a two-pair hosiery box which we called the "Twin Package." This was a compact, purse-sized envelope packet, holding two pairs of stockings and worked out with an attractive laminated cover in a red-and-white design. The package encouraged multiple sales and was particularly suited to gift promotions. To personalize the package, we dressed twin miniature mannequins in red suede jumpers and crisp white blouses, perched jaunty little red caps with Roman Stripe ribbon streamers on their blonde curls, seated them on a little, white swing and christened them Roman Stripe's "Hosiery Twins." Developing the theme of the promotion, "Make Her *Twice* as Happy with Hosiery Twins," we approached every phase of the display from the twin angle. The miniature mannequins were prominently displayed in the hosiery department, surrounded by the twin packets of hosiery. Life-size twin models in (*Continued on page 100*)

9. "Miss Roman Stripe," a miniature mannequin by Jan Norriss, is the company's new trade mark—affectionately known to her employers as "Dizzy Lizzie." 10 and 11. To promote its two-pair package of "swing-heel" stockings, Roman Stripe used twins with caption: "Make her twice as happy with Roman Stripe's inside-out hosiery twins."



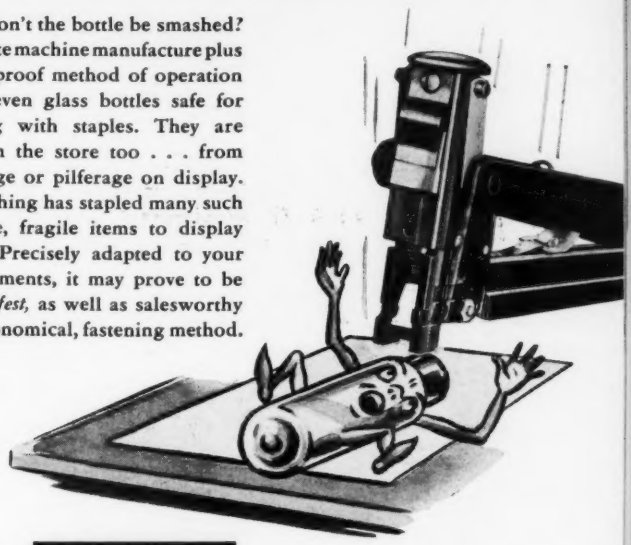
Concealed Bostitch Staple HOLDS the "Sell" in a Powder Box

You can hardly see the single Bostitch staple that fastens this prize-worthy package to a rising sales curve. It's a bath-powder box, shaped like a summer hat in pink and blue, and securely stapled by a Bostitch machine in one swift, money-saving operation. It keeps its trim, eye-catching shape wherever it goes . . . in shipment . . . on the counter . . . or near the lady's bath tub.

BOSTITCH *for Sales Appeal*

Don't Worry! Bostitching is SAFE, Even for Carding Glass Bottles

Why won't the bottle be smashed? Accurate machine manufacture plus a fool-proof method of operation make even glass bottles safe for carding with staples. They are safer in the store too . . . from breakage or pilferage on display. Bostitching has stapled many such delicate, fragile items to display cards. Precisely adapted to your requirements, it may prove to be your *safest,* as well as salesworthy and economical, fastening method.



BOSTITCH *for Protection*

Casting Around for a PROFITABLE Carding Technique?

The manufacturer of fish lures saved $2,000 per year when he solved *his* carding problem with staples. Bait and hook had to be held securely, yet leave space for selling message in open display. A difficult packaging operation was thus performed by Bostitching — with a large saving into the bargain.

BOSTITCH *for Economy*

BOSTITCHING A definition for better fastening

Bostitching means . . . using the right stapling, stitching or tacking machine, the right type and size of staple to get the most efficient fastening results . . . to fasten it better with wire.

Make plans today . . . cash in tomorrow! Bostitch engineers are prepared to study your packaging or carding problem and make time-and-money-saving recommendations. SEND SAMPLES OF WORK FOR FREE FASTENING-ANALYSIS. Address Bostitch, 50 Duane St., East Greenwich, R. I.

BOSTITCH Fastens it Better ... with Wire

STAPLING···STITCHING TACKING

A "PUZZLE" package doesn't help sales

No fumbling—
a quick tug
opens the wrap

An easy-opening tape is a sure cure for a hard-to-open wrap

Be sure your customers get a trouble-free, easy-opening package when they buy your product. Offer them the greater convenience of an *easy-opening* device—and watch the reaction on your sales sheet.

Illustrated are a few of the many package goods leaders who have added an easy-opening device to their packages. You'll notice that we adapt the wrapping to the nature of each product and the easy-opening device is incorporated in such a manner that the package is completely and firmly sealed—thereby affording the utmost protection for the product, as well as convenience for the user.

Consult us today and find out how this new device can be adapted to the wrapping of your product.

IMPORTANT

Our machines may be adapted to any type of wrapping material—an important advantage should you have to switch to a different material because of present-day shortages.

Write for Literature

PACKAGE MACHINERY COMPANY, Springfield, Mass.
NEW YORK CHICAGO CLEVELAND LOS ANGELES TORONTO
Mexico, D.F.: Agencia Comercial Anahuac, Apartado 2303
Buenos Aires, Argentina: David H. Orton, Maipu 231
Peterborough, England: Baker Perkins, Ltd.
Melbourne, Australia: Baker Perkins, Pty., Ltd.

PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

Packaging a volatile, flammable liquid. Lights are vapor-proof; motor, spark-proof. Room air changed every two minutes.

Merck safeguards packaging department against fire

*by Leonard F. Maar**

Very little has been said or written about fire safety in packaging departments. Source literature on fire protection recognizes a few of the special hazards to be met in packaging operations, but it does not treat the subject comprehensively. For this reason, a report on how one outstanding manufacturer handles the different phases of the problem is of considerable interest at this time when delays or interruptions of production and waste of material must be avoided.

Merck & Co., Inc., manufacturing chemists of Rahway, N. J., provides the model plant. Some of the chemicals packaged there are no more hazardous than dill pickles. Other chemicals are extremely flammable and volatile. Still others are not dangerous in themselves, but they react dangerously when they come in contact with other chemicals. The Merck line consists of more than 1,500 products and for many of the individual items there are packages of different sizes. And, in addition to the chemical hazards, there are the usual hazards of plant and machinery to be safeguarded, as well as the human factor to be controlled. So, all in all, Merck has a real problem of maintaining fire safety in its packaging department.

The man in charge of fire prevention and protection at the Rahway plant is H. B. Suiter. He likes to begin with fundamentals—the common hazards which ordinarily cause the majority of fires in most occupancies.

* Safety Research Institute.

1

2

1. In the room where dry chemicals are packaged, workers are protected against dust by hood ventilators. Soda-acid fire extinguisher on post is used for fires in ordinary combustible materials. 2. Water or other liquids would damage some chemicals, so the carbon dioxide type of extinguisher is provided.

In that section of the packaging department where non-hazardous materials are handled, there is the usual assortment of electric motors, conveyors, switches, etc. Only a licensed electrician is allowed to make repairs, installations or changes in wiring. This insures conformity with the local electrical code and with the requirements of the fire insurance underwriters, the Associated Factory Mutual Fire Insurance Companies and the factory insurance associations, whose inspectors visit the plant frequently.

Non-hazardous processes

Placed conveniently near packaging tables are containers for refuse, one for paper and another for broken bottles or other material that should not be mixed with waste paper. Special emphasis is placed on the importance of emptying containers at the end of each work period and all waste paper is burned. This may seem an extravagance in this day of waste paper shortage, but actually it is a precaution against allowing any chemically impregnated paper or oily paper, that might cause spontaneous ignition, to leave the plant.

Floors are kept immaculately clean and no refuse is allowed to accumulate in corners or under tables and benches.

The no-smoking rule is rigidly enforced and there are only a few areas, such as the offices in the administration building and the cafeteria, where smoking is permitted. You see no ash trays on the desks of the executives in the plant area. And all employees are cautioned not to carry "strike-anywhere" loose matches that might be dropped inadvertently and ignited under foot or by the wheels of a passing electric or hand truck.

All areas where dry chemicals are weighed and packaged are ventilated by suction blowers. This ventilation system is more a health precaution for the workers and a safeguard against product contamination than for the prevention of dust explosions, for the amount of dry material suspended in the air would be small in any case.

Bales of excelsior, used for packing shipments, are kept in a separate room that has fire-retarding walls. The door to this room, or vault, is a fire door, operating by means of a fusible link.

All wall openings are protected by fire doors, even small openings high in the walls. The mechanism of each door is tested periodically as an added safety measure.

The most hazardous materials handled in the packaging department, from the point of view of fire safety, are the flammable solvents.

Flammable solvents

The solvents are handled in drums and tanks from which the liquid is subdivided into smaller cans and bottles of different sizes. There are three points in the packaging department where this subdividing of flammable solvents is done. One room or shed, well separated from other buildings, is designed for the handling of extra-hazardous liquids. This room is ventilated top and bottom by a positive pressure blower and also directly at the position of the worker. Radiators are installed at the middle-height of the walls and are protected by wooden covers so that no spark can result from metal-on-metal contact.

Of particular interest is the method Mr. Suiter has devised for controlling static sparks in the filling equipment. The drum of a highly flammable liquid is kept outside the subdividing room and is connected to a pipe supply line feeding the filling apparatus. Static is drained from the drum by a screw clamp connected to a ground by flexible stranded copper. Between the drum and the supply line is a rubber washer, minimizing the transfer of static from drum to pipe. The pipe supply line is grounded also. The filling apparatus inside the room is connected with the supply line by an explosion-proof flexible metal coupling. Any static in the liquid is drained off by a copper wire extending up into the filler spouts of the glass-filling apparatus and connecting with the grounded supply line. A metal plate upon which cans are set to be filled also is grounded to the supply line. Diagrams of the methods of grounding drums and the filling apparatus are illustrated in this article.

Another room, separated from other structures but not so carefully safeguarded, is used for subdividing other flammables with a higher ignition temperature.

The third place where solvents are packaged is a large, specially constructed room, where the air is completely changed every few minutes by huge positive pressure blowers.

The lights in these three places are vapor-proof and all motors and switches are spark-proof. Employees engaged in these operations are instructed in the hazards of their jobs and in the action to be taken in case of an emergency. The

result is that they go about their work with an air of confidence that is apparent even to a visitor in the plant.

Tests with a gas indicator (explosive meter) are made frequently in these areas.

To mix certain chemicals may be dangerous. For example, some should be kept away from acids, organic matter and ammonium salts. Others must be kept dry, for in contact with water they heat and give off poisonous flammable gas.

It is advisable, therefore, to separate these dry chemicals into classes and to store them in separate buildings or sheds, and to exercise unusual care in packaging them.

Plant protection

Obviously, the plant where such a combination of hazards exists must afford every possible means of fire protection. Buildings are of fire-resistant construction for the most part. Where flammable liquids or oxidizing chemicals are packaged, there are specially designed buildings and equipment.

We have pointed out that all wall openings are equipped with fire doors, as well as special storage vaults.

Automatic sprinklers have been installed in all areas where a deluge of water will not be objectionable. Outdoor areas such as covered platforms, are protected by a dry pipe-sprinkler system.

Electric trucks move continuously through the various departments of the plant, but only those trucks that have spark-proof motors are allowed in areas where the flammable solvents are handled. Each of these special vehicles is plainly marked, as in the illustration. Hydrant and hose houses are located at strategic points throughout the plant.

The first line of defense against fire is the fire extinguisher. Different types of extinguishers, suitable for use on the class of fire that may be expected at any point, are located throughout the plant and these locations are marked by red bands painted on posts and walls.

Where only ordinary combustible materials are involved, the soda-acid type extinguisher is provided. The carbon dioxide type and foam type are standard equipment where flammable liquids are exposed and the vaporizing-liquid extinguisher is used to protect electrical hazards.

Every male employee in the plant is instructed in the use of fire extinguishers, so that if a fire is discovered soon after it starts there is every chance that it will be put out by people on the scene before it spreads beyond control.

This instruction is part of the safety training afforded every employee. When a man or woman goes to work in the Merck plant, he or she must attend a series of five lectures and demonstrations—on company time—one of which is devoted to fire safety and fire extinguishers. After the course is completed, the employee must take a written examination and make a passing grade or repeat the course. He learns during the course how to turn in a fire alarm.

Each division of the plant, including the packaging department, is divided into districts and zones, and each is numbered. Any employee, upon discovering fire, is supposed to go to the nearest telephone and dial the emergency number, which connects him with a special phone in the engineer's office. Whoever answers the call demands, "Where's the fire?" This prompts a direct reply. The person giving the alarm looks on the dial of the phone in front of him and reads the district and zone numbers. Or, if the connection has been made in error, the abrupt question helps straighten the matter out right at that point.

As soon as the engineer receives the alarm, he pulls the alarm box connecting with the Rahway public fire department and not until this is done does he sound the plant alarm whistle which, by code number, calls the plant fire brigade to the scene of the fire.

The packaging department and other divisions of the plant have an employee safety committee which inspects the departments, reports on conditions found and makes recommendations for improving conditions. Each division also has a member on the plant safety committee which passes on the recommendations of the employee committees.

All employees are invited to make suggestions for improving the fire safety and general safety of their departments. Each January the company is host at a dinner and party for the members of all the safety committees and the fire department. Other employees making two usable safety suggestions during the year also are invited to attend. Small prizes and awards are made for usable suggestions.

The result of such a system, of course, is beneficial. In a section of the packaging department, there is an outdoor mixing tank. Flammable solvents pass through this tank and, though the motor which pumps the liquids is outdoors, it, too, is a spark-proof motor. It was installed at the suggestion of an employee, not only to prevent ignition of fumes that might leak from the tank, but also to prevent ignition of any fumes that might drift in that direction from other

3. Vapor-proof jitney enters a section of the Merck plant where flammable liquids are packaged. Fire door protects the vault where excelsior used in packing is stored. 4. Members of the Merck plant fire brigade unload hose from their specially designed fire truck during one of their fire drills.

3

4

sources. Employees are responsible for many improvements.

Mr. Suiter is active chief of a fire brigade of 80 men. When a fire occurs, he determines what is burning before ordering water turned on the fire.

Plant firemen are carefully instructed and drilled. They are located in all parts of the plant, so that in a matter of seconds there is a trained man on the scene of a fire emergency. Many of these fellows are volunteer firemen in the public departments of the towns near Rahway.

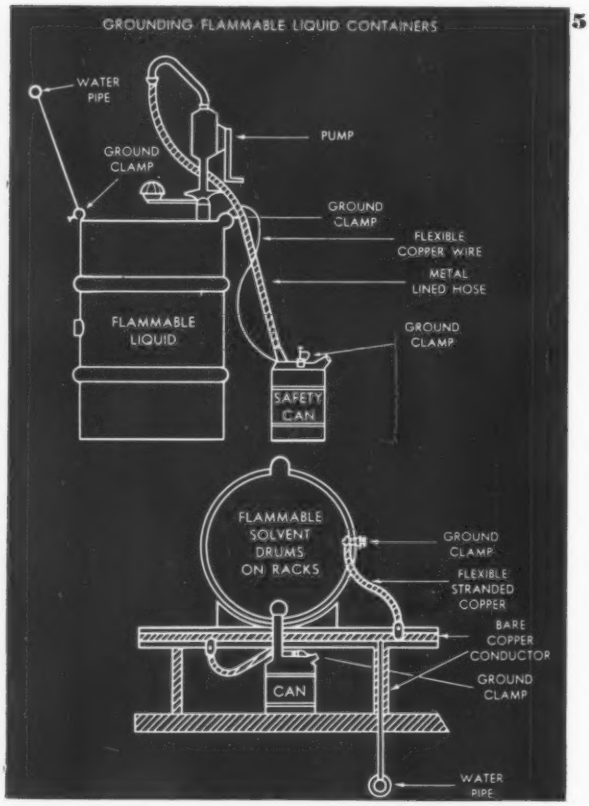
The brigade has a new motor truck, specially designed to cope with chemical fires. The design was inspired by the crash trucks used on aviation fields. Its equipment includes:

A foam hip pack.
Foam solution which is the equivalent of one-half ton of foam powder for fires in gasoline, benzol and other flammable liquids.
A foam nozzle and foam generator, and 1,250 lbs. of a special foam powder, for use on alcohol fires.
Shut-off and spray nozzles, and $2^1/_2$-in. hose.
Six 70-lb. tanks of CO_2, two of which are manually controlled and the others of the plunger type.
Horn type applicator, 125 ft. of hose for carbon dioxide.
Booster tank of 18-gal. capacity which operates at 150-lb. pressure; 200 ft. of 1-in. hose.
Gas masks, axes, pike poles, search lights, boots, coats, helmets, etc.

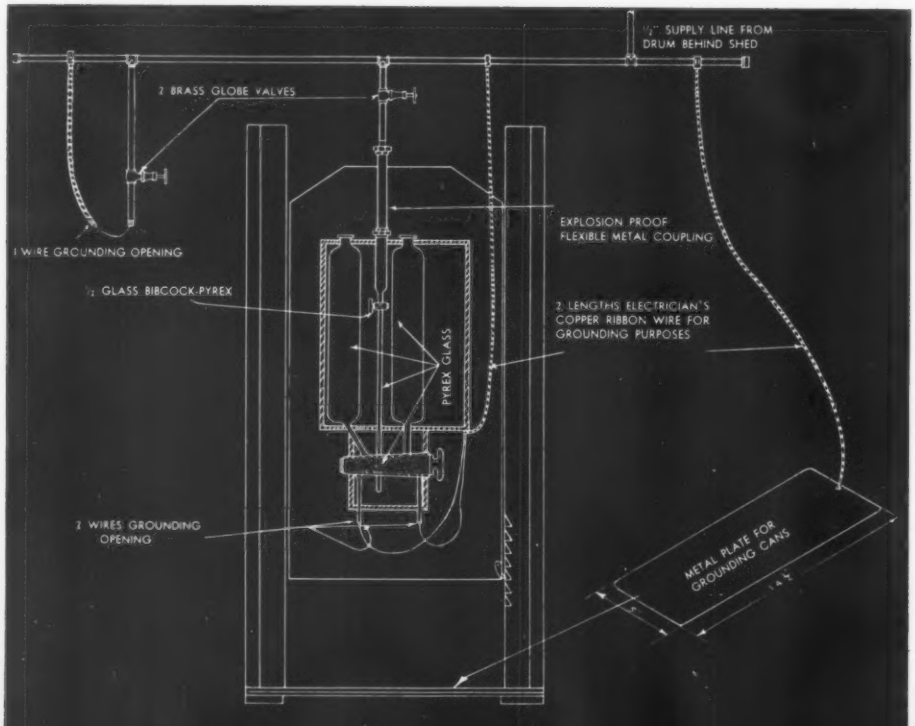
No ladders are carried on the truck, but they are placed at strategic places about the plant so they can be brought into use without delay. Many members of the brigade have taken the Red Cross course in first aid.

With this system of fire protection, the great majority of fires are stopped in their inception by employees using fire extinguishers and, if heavier artillery is needed, the plant fire brigade and the Rahway fire department are on hand with all their special resources.

The government is buying from Merck many chemical supplies for its armed forces. The production of this material must not be interrupted by any cause, so special guards are stationed around the fenced-in plant area to keep intruders away. All plant employees are required to wear badges on which appear their photograph and name and even visitors must wear identification tags before they will be granted admission to the plant. Such precautions increase the fire safety of the plant considerably and protect it from malicious intruders and from the carelessness and ignorance of strangers. In this connection, the production departments may be considered of paramount importance, but certainly the packaging department also must be protected if the chemicals needed by Uncle Sam and Merck's many other customers are to be speeded on their way.



5


½" SUPPLY LINE FROM DRUM BEHIND SHED
2 BRASS GLOBE VALVES
EXPLOSION PROOF FLEXIBLE METAL COUPLING
1 WIRE GROUNDING OPENING
1 GLASS BIBCOCK-PYREX
2 LENGTHS ELECTRICIAN'S COPPER RIBBON WIRE FOR GROUNDING PURPOSES
PYREX GLASS
2 WIRES GROUNDING OPENING
METAL PLATE FOR GROUNDING CANS

5. Method for controlling static sparks in the filling equipment. Drum of highly flammable liquid is kept outside subdividing room and connected to a pipe supply line feeding filling apparatus. 6. Filling apparatus for inflammable solvents showing ground connections for preventing accumulation of any static electricity.

(*Page 82*)

Drawn rigid plastic containers and displays

Because of the increased interest in drawing, swedging and thermoplastic molding, Modern Packaging is presenting in this article the latest progress in this field. On page 88 is an article describing the drawing of ethylcellulose sheeting. In several instances the illustrations include items other than packaging to show the inherent possibilities of these materials and processes for package containers and display units.

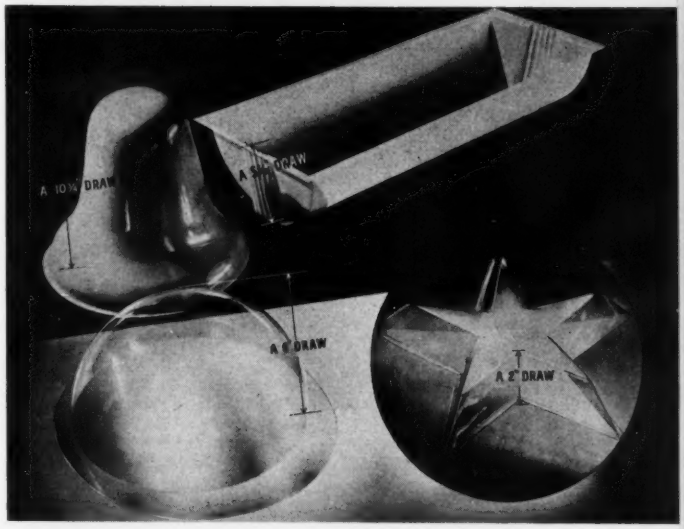
A commercial method for producing rigid packages from sheet stock of cellulose acetate, ethylcellulose, cellulose nitrate and vinyl resins, which has recently been much expanded and perfected, is deep drawing, swedging or thermoplastic sheet molding. This method consists basically in transforming a more-or-less two-dimensional sheet into a three-dimensional form by means of dies in a drawing press, under the application of heat and pressure. The term drawing is differentiated from embossing by restriction to the process in which sufficient material flow takes place so that the wall thickness of the finished piece is the same as that of the original sheet stock. Embossing, on the other hand, assumes that a certain amount of stretching takes place with consequent reduction in wall thickness. Some manufacturers combine both processes—drawing for strength and embossing for unusual effects.

More and more drawn types of rigid transparent containers and displays are being used. They are more sturdy, more sift-proof, more adaptable to the object contained. Prospective users should keep in mind, however, the relatively higher initial cost and should not try to use these drawn types unless their quantities are large and no immediate or sudden change in design or shape is required. One manufacturer claims, however, that individual designs can be produced economically for short runs. This is one of the great advantages of his process, he says. It is possible to run as low as 1,000 pieces or as many as 100,000 without a staggering set-up charge. The size of the item holds no problem for this man. An item can be molded 3 ft. by 5 ft. or 3 in. by 5 in. with the same ease.

It takes some weeks to make special drawing dies, depending upon their intricacy, and some consideration should be given to possible delays due to priority control. The prospective user should also consider the manufacturing facilities of his prospective supplier.

Seamless drawn, transparent packages have received con-

1



2

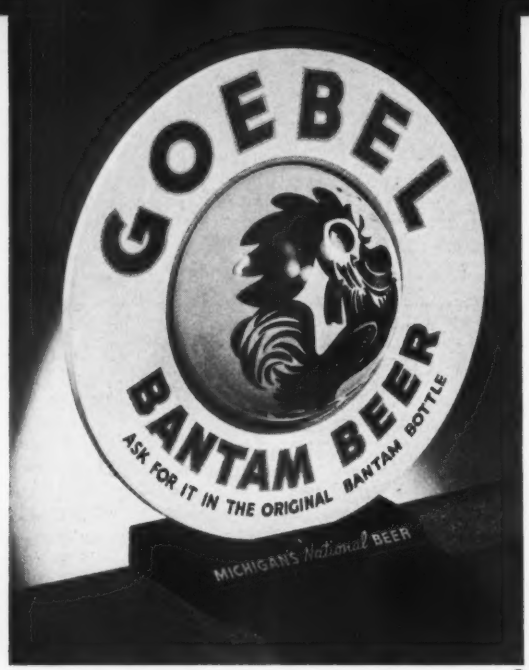
3

1. Various types of small drawn rigid plastic boxes, cylindrical in shape with shallow lid. Also a drawn platform to hold lipstick and make-up that fits into cardboard powder box. 2. Fine deep drawing qualities of transparent sheeting used for safe, lightweight shields for lighting fixtures. Note wrinkle-free flanges on the hemisphere, fidelity of form of the star. 3. More excellent examples of deep drawn lighting fixtures, also display signs.

(*Page 83*)

4

5



6

7

4, 5 and 6. Rigid plasting sheeting for these three-dimensional displays is first printed flat. The sheeting is then drawn to the desired shape, giving the third dimensional effect to printed surface. The ink is such that it is chemically bonded with the plastic. 7. This counter display unit for Kelton Watches has a molded base and a transparent hood of drawn plastic sheeting.

centrated attention of designers and technicians since the advent of these materials. Cellulose acetate, ethylcellulose and vinyl sheeting are proving their true value in the packaging field. Having good dimensional stability, moisture resistance and other elements, they open a field of wide use.

Deep drawing can be used in numerous ways. For large items where strength is necessary, it lends itself to great advantage. It is possible to design and mold contours, ribs or corrugations similar to metal stampings to get strength and rigidity. The slow curve or the small radius in corners does much to build solid, strong displays and packages. This method of securing strength has been developed to a fine point and it can be applied by the craftsmen to achieve the best results. The range of gauges of materials make possible a wide application to this process and though it is young the past year has seen a great expansion. Embossed designs can be produced for added beauty. For the individual display, where appearance and finish is of paramount importance, colored materials can be utilized. Some manufacturers have a process which allows printing before drawing. They claim that the ink becomes integral with the finished acetate or nitrate piece under the heat of drawing.

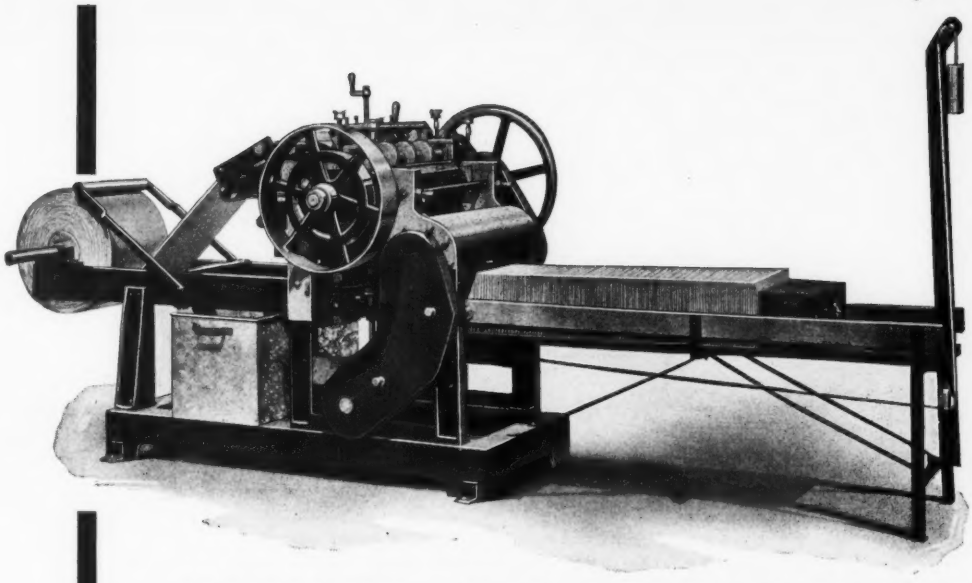
Clear domes

The clear dome for displays has an advantage in that it prevents pilferage and enhances the appearance of the merchandise. Domes of transparent plastic are not broken readily and they prevent dust from damaging the merchandise. Seamless displays and packages have a streamlined appearance which adds quality to the merchandise and individualizes the product.

The designer of drawn pieces is limited only by his or her imagination. Ovals, circles, hemispheres or oblongs with rounded corners are all feasible. There are designs of ornate type which can be reproduced countless times.

For the display artist the process opens a field so wide that only the molding arts can equal it. The embossing of trade marks and names appeals to quality buyers. Miniature showcases can be developed using covered dome windows which have a distinctive character. Plaques for advertising purposes, which have a third dimension, are always appealing. The entire spectrum and a fine range of textures are at the designer's disposal—marble or cloth finishes, wood or pastel shades, transparent, opaque or translucent qualities for lighting effect.

In many so-called drawing operations the wrong temperature, incorrect die clearances, faulty die design, too slow or too rapid time cycle or the use of the wrong sheet stock for a specific job produce parts which are described as "drawn," but they are really a combination of drawing and embossing.



PACKOMATIC CARTON MAKING MACHINE

Makes 125 to 200 cartons per minute, 3 h.p. drive motor. Requires only 4-ft. 6" wide by 14-ft. long floor space.

A MACHINE THAT WILL SHOW A SAVING IN PAPER STOCK AND INCREASE PROFITS

PACKOMATIC Carton Making Machines, were especially designed for packers who use plain unprinted cartons. Chip board stock can be secured in any size rolls desired and cartons made in your own plant as you need them, on a tonnage basis.

The chip board is fed from the roll automatically, is cut, scored, folded and long seam glued, and the cartons delivered in a knocked-down form, ready for lining or filling equipment. Only one operator required.

SOME CUSTOMERS REPORT A SAVING OF $1.00 PER THOUSAND CARTONS

AUTOMATIC PACKAGING MACHINES FOR EVERY PACKAGING PROBLEM

PACKOMATIC equipment meets every packaging need, with increased production, lower costs. We build a large variety of scales, volume fillers, auger packers and fillers, carton sealers, round paper can equipment, carton making machines, etc. In this group you will also find "The Packomatic Way the most economical way."

THE PACKOMATIC AUTOMATIC CASE SEALER FOR SEALING CORRUGATED AND FIBRE SHIPPING CASES

We present the ideal machine for handling all types of paper cases to suit your conditions. Automatic Top and Bottom Sealers; Top Sealers, or Bottom Sealers only, Skip-Glue, Spot-Glue, or all-over Glue mechanism. Compression unit any length desired, Automatic Marking Device, etc.

PACKOMATIC
PACKAGING MACHINERY
J. L. FERGUSON COMPANY, JOLIET, ILLINOIS

* ***Our engineers will gladly call and furnish you with important information based upon our twenty years of solving packaging problems. No obligation.***

Table I. Drawn Containers

Size		Containers			½-In. Cap.			
Dia.	Depth	Material Type	Material Thick.	Sq. Blank Area/Sq. In.	Material Type	Material Thick.	Sq. Blank Area/Sq. In.	Total Area Sq. In.
3 in.	1 in.	Regular	0.005 in. 0.0075 in. 0.010 in. 0.015 in. 0.020 in.	(4¾ × 4¾) 22.5	Rigid	0.010 in.	(4 × 4) 16	38.5
3 in.	1¾ in.	Regular	0.005 in. 0.0075 in. 0.010 in. 0.015 in. 0.020 in.	(5½ × 5½) 30	Rigid	0.010 in.	(4 × 4) 16	46

It is true that a container produced by stretching the stock may require slightly less material and the production speed may even be higher. Needless to say when a part is to some extent embossed rather than drawn, the accompanying reduction in wall thickness produces a less rigid part. "Stretching" the material will set up internal strains which weaken the sheeting considerably and may cause brittleness. This may contribute to the collapse of the containers or inadequate protection to the merchandise contained therein. These facts should be kept in mind throughout this discussion, since consideration has been limited to containers which are "drawn" in the true sense of the word and retain the full strength, thickness and surface finish of the original material. Drawn containers require, if anything, slightly less material than set-up containers of the same size. This difference is so slight that for practical consideration the material costs in each case are usually quite comparable. Table I shows the amount of stock used for "drawn" and "set-up" containers of the same size as well as the relative amount of time required to produce each type. One important factor is that, due to the size of the set-up containers, drawn tops and bottoms were employed which substantially reduced the fabrication time. If the diameter were increased to 7 in. or 8 in. and, due to the lack of suitable drawing equipment, it became necessary to make a top by the conventional two-piece method, the time required to produce the set-up container would probably be three times that required for the drawn containers of same size instead of 1.6 and 1.5 as in the table.

From the above, it will be seen that while drawn containers require about the same amount of material as set-up containers of the same size, a substantial reduction in manufacturing cost results from the increased production speed of the drawn type of container. Drawn containers also have more pleasing appearance and, because of the elimination of all seams and cemented joints, there is less likelihood of the container failing in actual use.

The question of the maximum depth for a *single* draw is frequently raised. It has been found that under normal production conditions the deepest draw to make economically is about (2:3), 2 in. in depth. Acceptable drawn parts have been produced 3 in. in diameter and 2½ in. deep. In this extreme depth of draw, however, all conditions have to be nearly perfect, with the result that it is not recommended under average operating conditions. With *multiple* draws much greater depth can, of course, be obtained.

Credits: Materials by Eastman Kodak Co.; Monsanto Chemical Co., Plastics Division; Celanese Celluloid Corp., Union Carbide & Carbon Corp.; The Dow Chemical Co. Fabrications by General Plastics Corp., W. P. York & Co., J. M. Gordon Co., Display Center and Design Center., Inc.

Table II. Set-Up Containers

Size		Side Wall			½-In. Cap.			⅜-In. Bottom			Total Area
Dia.	Depth	Material Type	Material Thick.	Sq. Blank Area/Sq. In.	Material Type	Material Thick.	Sq. Blank Area/Sq. In.	Material Type	Material Thick.	Sq. Blank Area/Sq. In.	Side Wall + Cap. + Bottom Sq. In.
3 in.	1 in.	Regular	0.005 in. 0.0075 in. 0.010 in. 0.015 in. 0.020 in.	(1 × 9¹¹/₁₆) 9¾	Rigid	0.010 in.	(4 × 4) 16	Rigid	0.010 in.	(3⅞ × 3⅞) 15	40¾
3 in.	1¾ in.	Regular	0.005 in. 0.0075 in. 0.010 in. 0.015 in. 0.020 in.	(1¾ × 9¹¹/₁₆) 17	Rigid	0.010 in.	(4 × 4) 16	Rigid	0.010 in.	(3⅞ × 3⅞) 15	48

Table III. Comparative Fabrication Time

Size	Set-Up Containers Sq. In. Mat.	Drawn Containers Sq. In. Mat.	Relative Area Set-Up/Drawn	Relative Time* Set-Up/Drawn
3 in. × 1 in.	40¾	38½	1.06	1.6
3 in. × 1¾ in.	48	46	1.04	1.5

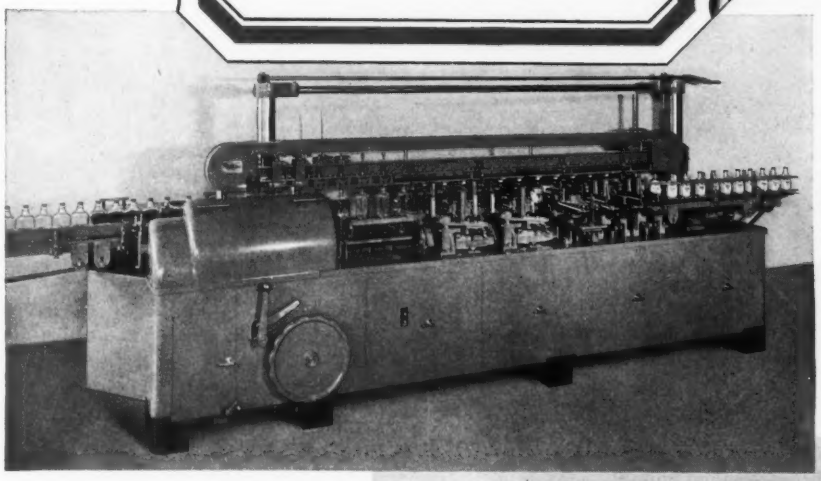
* The drawing process sometimes makes use of multiple molds, in which case, the relative time is in favor of the drawing process, since it actually takes no more time to draw 20 boxes than to draw one.

BUILT FOR

PRECISION LABELING

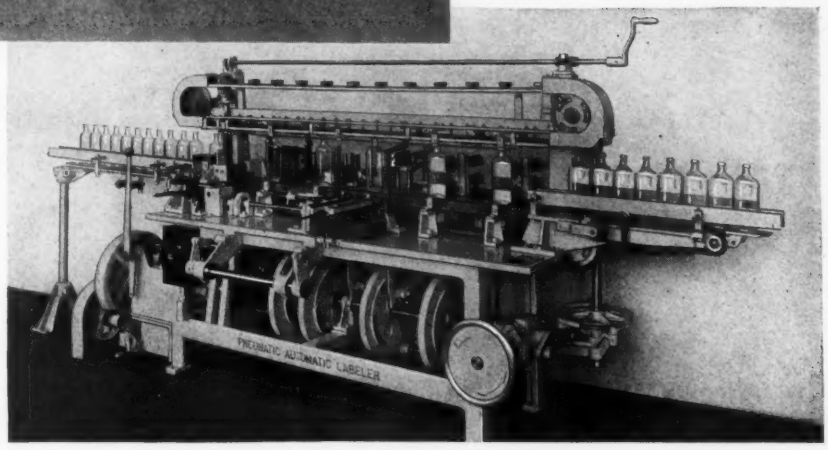
and

LONG DEPENDABLE SERVICE



Hi-speed Duplex Labeler — handles two containers at a time and applies front only, or front and back labels at speeds up to 120 per minute. Can be equipped with spotting device for accurately registering labels in relation to glass design or raised lettering on round bottles. Single or double line discharge available on this model.

Simplex Labeler — one of several models for applying front only, front and back, two front and one back, or partial wrap-around labels to bottles, jars or cans.

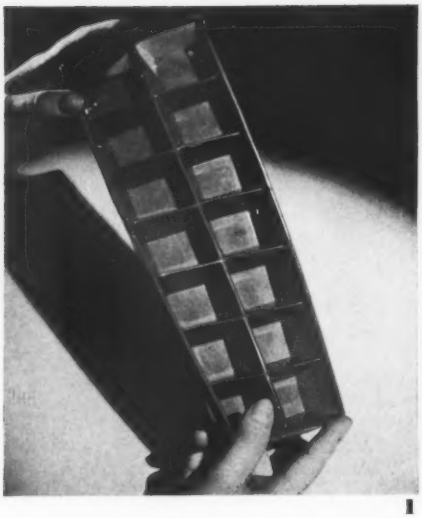


Sloppy labeling is an affliction to guard against because it can so thoroughly ruin the appearance of an attractive, well designed container.

Best prevention is the precision performance of Pneumatic equipment. And best proof of that statement is the continuous repeat orders Pneumatic receives every year from experienced concerns. Pneumatic's medium speed Simplex and Hi-speed Duplex labelers are built to deliver precision performance at a steady, adequate production pace. That kind of dependability pays! Dial escapement intakes which insure gentle handling of glass and easy accessibility are only two of the many factors that make Pneumatic labelers your best investment.

PNEUMATIC
PACKAGING & BOTTLING EQUIPMENT

PNEUMATIC SCALE CORP., LTD.
71 Newport Ave., North Quincy, Mass.
Branch Offices:
NEW YORK • CHICAGO • SAN FRANCISCO • LOS ANGELES



1

2

1. Ice cube tray drawn from ethylcellulose sheeting. It has excellent low temperature flexibility and has neither odor nor taste. 2. A counter display case for radio tubes which gives complete visibility.

Ethylcellulose sheeting in package fabrication

by F. C. Dulmage, Jr., and T. A. Kauppi**

Since the announcement of transparent ethylcellulose sheeting a year ago,† cylindrical rigid containers produced by the drawing process have been growing in popularity both with users and with fabricators of transparent packages. This has resulted from an increasing demand by the consumer for greater visibility of the packaged goods undistorted by lapped joints, seams or beaded edges. Additional factors in promoting the use of drawn containers are the desire of the fabricator to eliminate the number of steps involved in turning out the package and his need to produce a package of improved durability and sales appeal at a minimum expense for skilled labor.

To meet these demands of the fabricator, drawing presses have been developed which automatically draw and trim one-piece cylindrical bodies or covers in a single operation. Improvements in transparent sheeting have kept pace with the capacity of these machines so that one-piece drawn box tops and bottoms can now be made at greatly increased production rates.

Since the drawing process offers unusual possibilities in reducing labor costs per package unit, it may be asked how it compares with the slower fabrication methods involving beading and adhesive sealing, which methods require five or six operations to complete the container. In an attempt to answer this question this article points out factors influencing manufacturing costs of cylindrical containers by four different methods of construction and gives the results of durability tests on each type.

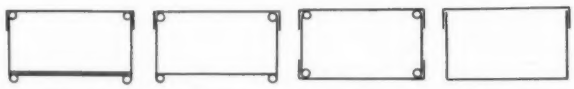
* Safety Research Institute.
* Plastics Sales Division, The Dow Chemical Company, Midland, Michigan.

† Modern Packaging, September 1940.

Types of box construction studied

In this work all boxes were constructed of ethylcellulose sheeting and measured $3^1/_8$ in. diameter by $1^3/_4$ in. high. The four types of construction chosen are shown diagrammatically in Fig. 1.

Fig. 1
Types of Construction of Cylindrical Boxes



Type 1 Type 2 Type 3 Type 4

Types 1, 2 and 3 are lap-seam cylinders beaded at both ends and fitted with a shallow drawn top. They differ only in the bottom construction; Type 1 has a cardboard disc sealed to the bead; Type 2 has a disc of ethylcellulose sealed to the bead, and Type 3 has a shallow drawn top and bottom sealed to the outside of the cylinder.

In contrast with these, Type 4 has a one-piece deep drawn bottom of ethylcellulose with a snug fitting shallow drawn top of the same material.

The four constructions used in this study do not include all the possibilities, but they do provide a fair basis for evaluating manufacturing costs, durability and appearance.

Manufacturing costs

The two factors principally affecting the cost of rigid transparent containers are the cost of materials and the cost of fabrication. These may be subdivided as follows:

THE MORRISON TYPE-SL HEAD *MODERNIZED* WIRE STITCHING!

The Morrison Type-SL Head used on the complete line of Morrison Wire Stitching Machines, was introduced about two years ago. Its revolutionary design and construction did more to *modernize* wire stitching than any other stitcher head development in the entire history of wire stitching machines.

Simplicity of design, rugged construction of all working parts, quick accessibility for adjustments to meet specific job conditions, and easy maintenance are among the features that have made the Morrison Type-SL Head an outstanding success in a multitude of applications.

The Type-SL Head is standard equipment on the fifteen models of Morrison bottom stitchers, top sealers, combination units, side seamers and arm machines.

The Morrison line has gone far to make wire stitching the most versatile, economical, and speediest method of assembling and sealing containers as well as the most efficient method of fastening a wide variety of materials.

MORRISON WIRE STITCHERS HELP SPEED DEFENSE

Working in coordination with many production and shipping operations in plants engaged in defense business, *Morrison Wire Stitching Machines* are eliminating "bottlenecks" in vital defense industries.

But SEYBOLD SERVICE in strategic locations (see list below) is organized to help maintain existing machines in efficient operation. Name your needs and SEYBOLD will make every possible effort to cooperate.

SEYBOLD DIVISION

HARRIS • SEYBOLD • POTTER COMPANY

843 WASHINGTON STREET • • • DAYTON, OHIO

SEYBOLD SERVICE

New York: **E. P. LAWSON CO., INC.,** 426-438 W. 53rd Street

Chicago: **CHAS. N. STEVENS CO., INC.,** 110-116 W. Harrison Street

HARRIS-SEYBOLD-POTTER CO., 843 Washington St., Dayton, Ohio

Southern Sales District: **HARRIS-SEYBOLD-POTTER CO.,** 120 Spring St., N. W., Atlanta, Ga.

West Coast District: **HARRY W. BRINTNALL CO.,** San Francisco, Los Angeles, Seattle

Canadian District: **HARRIS-SEYBOLD-POTTER (CANADA) LTD.** Toronto and Montreal

1. Material Costs
   (a) Thickness of transparent sheeting used
   (b) Area of sheeting
   (c) Adhesives (when necessary)
2. Fabrication Costs
   (a) Tooling
   (b) Number of operations
   (c) Speed of operations

The selection of the thickness of the transparent sheeting to be used depends upon the rigidity and durability required in the finished package. Rigidity is generally the more important factor and will, of course, be influenced by the type of construction. In the four types studied, Type 3 was somewhat more rigid, and the other three were about equal.

The surface area of sheeting required for each type of box construction studied is listed in Table I. Type 1, with the cardboard bottom, required the lowest area; Type 2, with a bottom of transparent sheeting, was next; and Types 3 and 4 were almost identical. The areas of circular pieces were calculated as the area of a square $^1/_4$ in. longer on the side than the diameter of the circle needed.

Table I also shows the number of separate operations required to fabricate each box, starting with the pieces of ethylcellulose sheeting already cut to size, or died out into discs. Type 2 box, for instance, requires five operations: (1) bead both edges of body, (2) shape and seal beaded piece to form a cylinder, (3) insert and seal bottom, (4) shallow-draw the top, (5) assemble top to body. If only one edge of the side-piece can be beaded at a time, an extra operation is necessary. For Type 4 box the operations are: (1) shallow-draw the top, (2) deep-draw the body, (3) assemble top to body. If the tops and main portions of the boxes are to be shipped unassembled, the number of operations required for each box will be one less than is shown.

Fabrication costs for each of the four types of transparent boxes are dependent to a large degree on the number of boxes required. Boxes of Types 1 and 2 would have the lowest fabrication costs on a small quantity job, because tooling costs could be kept low. Type 3 would be next, while the drawn box of Type 4 could not be made economically in small quantities unless a die for drawing the main portion of the box were already on hand.

However, as the number of boxes required for a given job is increased, a point is reached at which the fabrication costs for Type 4 box are equal to those for Type 3. At this point, the greater tooling costs of Type 4 are offset by the greater labor costs of Type 3. In the same way, as the number of boxes is increased still more, the lower fabrication cost for Type 4 will offset both lower tooling costs and lower material costs of Types 1 and 2.

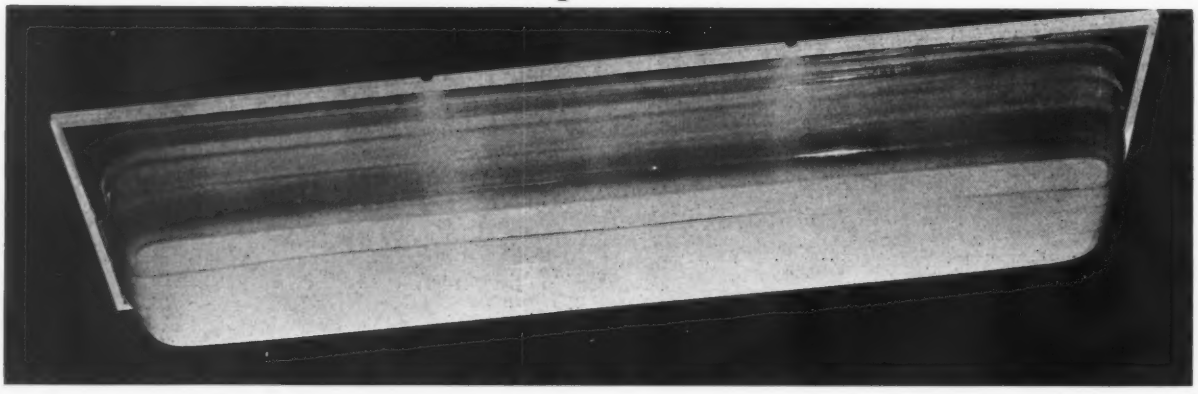
The size of job required to make the drawn two-piece box of Type 4 more economical than the others will vary, of course, with different jobs, and will be different in different locations, as the cost and efficiency of hand labor varies. Increasing labor costs, decreasing availability of sufficiently skilled workers, and improvements in the deep-drawing process, both in machines and materials, all tend to make the drawn box more economical on smaller jobs than in previous years.

Durability tests

In order to compare the ability of boxes to withstand rough handling during shipment and use, a tumbling test was employed in which the boxes were subjected to a series of sharp

3

4



3. Decorative plastic flower pot drawn from .020 ethylcellulose sheeting. The pot has a depth of 4$^1/_2$ in. and a circumference of 4 in. It is durable and light and demonstrates one of the many purely functional uses of the sheeting. 4. A fluorescent lighting fixture which has been drawn of ethylcellulose sheeting. Such fixtures are easy to handle and install and, because of the toughness of the sheeting, there is very little danger of breakage.

VARIETY IS THE LIFE OF THIS SPICE PACKAGING LINE

A variety of fine spices are packed by the Euclid Coffee Co., Cleveland, Ohio, under their various brand names. This necessitates a very flexible packaging line whereby changeovers of materials and to different size cartons can be made easily and quickly.

Requisite, too, are *accurate* filling by net weight—and *tight sealed* packages that adequately protect their wholesome contents. Operating speeds must be steady and dependable.

S & S, the line that meets all these requirements, consists of the Universal Filling Machine and a semi-automatic carton top and bottom sealing machine. Quickly adjustable to materials and package size, it fills, seals and delivers the finished packages at the rate of fifteen to twenty per minute. Only three operators are required for the entire process.

Let S & S suggest the equipment to fit *your needs. Filling machines — Carton filling and sealing machinery — Tight Wrapping machines — Transwrap packaging machines. Speeds to suit your needs — 15, 30, 60, 120 per minute.*

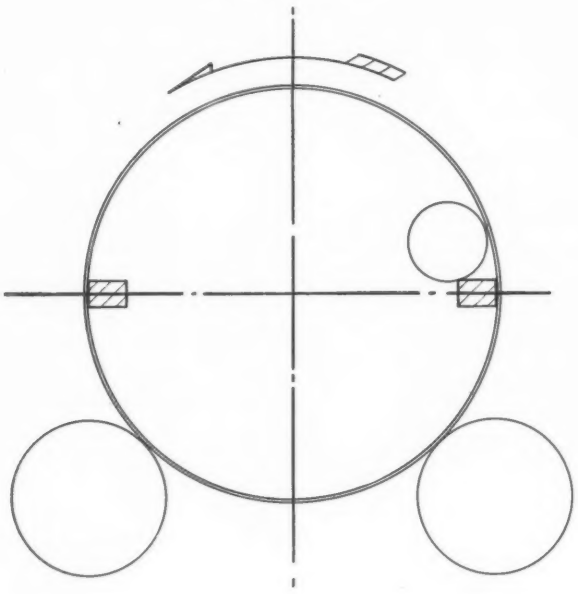
STOKES & SMITH CO.
FRANKFORD, PHILA., PA.

S&S *CARTON FILLING & SEALING*
SEMI-AUTOMATIC PACKAGING LINE

impacts. The severity of the test may be seen from the description given in the following paragraphs.

Several boxes were made up, using both 10-mil and 7.5-mil ethylcellulose sheeting, according to each of the four different types of construction and subjected to the durability test. In order to accelerate the test, each box was loaded with 100 grams of BB lead shot. The tops were sealed on, and the boxes were placed in a cylindrical fibre shipping drum 24 in. long and 16 in. in diameter. On the inside of the drum were fastened two wood strips 24 in. by 1 in. by $1^1/_2$ in., diametrically opposite each other, with the $1^1/_2$ in. dimension parallel to the radius of the drum. A sketch of the cross section of the drum is shown in Fig. 2.

Fig. 2
Cross section of drum



Four boxes were placed in the drum for each test and the drum was rotated around its axis at 35 r.p.m. During rotation, the wooden strips carried the boxes upward and then dropped them for a distance of about 10 in., at the rate of 35 drops per minute. The tests were run at room temperature, and at sub-zero temperatures, cooling the whole drum with dry ice. The temperature at the beginning of the cold test was −10 deg. F., and quickly dropped to −50 deg. F., where it remained fairly constant for the remainder of the test.

The average number of drops sustained before breakage by boxes of each type of construction and sheeting thickness are shown in Table I. The results varied considerably around the figures shown, but a sufficient number of checks was run in each case to make the results a fair average.

Room temperature tests

Boxes of Types 1 and 2 almost invariably failed by loosening or breakage around the sealed-in bottom. The sealed lap-seam on the side did not break, indicating that the impacts are much more severe at any corners or projecting portions of the box. Type 3 box was the most durable, as would be expected when the sealed-in bottom is replaced by a shallow-drawn cover.

Type 4 box was not so durable as Type 3, but was considerably more durable than Types 1 and 2. This result is rather surprising when it is considered that Type 4 has no beads to reinforce its construction and is definite evidence that the drawing process does not affect the inherent toughness of ethylcellulose sheeting.

Sub-zero tests

The low-temperature tests illustrate the excellent retention of toughness by ethylcellulose sheeting under extreme conditions of low temperature combined with low relative humidity. The tests on Type 4 box, in particular, show that even the internal strains produced by deep drawing have very little effect on low temperature toughness.

Conclusions

The deep drawing process for fabrication of ethylcellulose sheeting compares very favorably with other fabrication methods in the three factors of cost, durability and appearance. Improved machinery and materials have greatly reduced the waste of material by permitting smaller areas of trim and a very low percentage of rejects. These economies, and the increased speeds of operation, are very definite advantages on jobs involving a fairly large number of boxes.

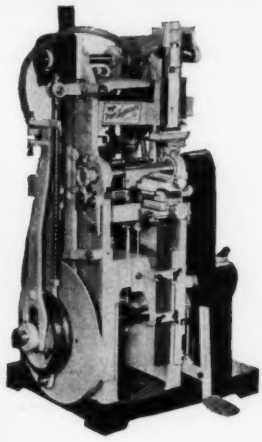
One of the objections to the deep-drawing of transparent sheeting has been the embrittlement of drawn portions of the sheet, with consequent shattering on being handled. The development of a type of ethylcellulose sheeting especially designed for deep drawing has eliminated this objection, as has been found in actual practice and durability tests show.

The appearance of a transparent package is a difficult factor to evaluate. Individual preferences vary tremendously, but it is probably safe to say that the lack of "fussiness" of a two-piece drawn container is in line with modern trends. Considered from the standpoint of functional design, deep-drawing methods offer the best approach to the fabrication of packages having the maximum possible visibility of the packaged goods.

TABLE I

Type of Construction No.	1	2	3	4
Diagrammatic Cross Section				
	Card-board	Ethyl-cellulose sheeting		
Material Data				
Area, square inches	40	52	60	59
No. of fabrication operations	5–6	5–6	6–7	3
	Impacts before failure			
Durability at +25° C.				
10-mil ethylcellulose sheeting	3,500	3,000	Over 6,000	5,200
7.5-mil ethylcellulose sheeting	3,000	2,500	Over 6,000	5,000
Durability at −50° C.				
10-mil ethylcellulose sheeting	3,000	3,000	Over 6,000	4,600
7.5-mil ethylcellulose sheeting	2,500	1,000	4,000	4,200

Credit: All items illustrated fabricated by General Plastics Corp. Ethylcellulose sheeting by The Dow Chemical Co.



Otto Struckman, dependable, quiet resourceful Service Engineer for New Jersey Machine Corporation, has been installing Labelrites and other units, and instructing operators for many years. He has offered many dollar-saving suggestions to many plant executives who were anxious to improve their methods. Like ourselves, those whom he contacts have confidence in him.

He's formed a thousand friendships in a thousand different plants —

Many years of training to employees who have long records of faithful performance provides us with a personnel which carries out the tradition of dependability established by the machines we've designed and built.

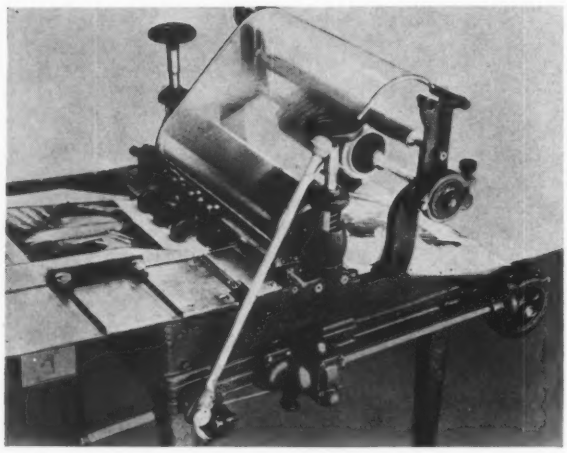
For more than 20 years we have served an increasing number of manufacturers, many of whom are standardizing on Labelrites, and asking for additional units. We welcome these orders, but point out that delays in delivery are unavoidable, for we, too, are delivering Defense machines.

NEW JERSEY MACHINE CORPORATION

1600 Willow Avenue Hoboken, N. J.
Chicago Office 325 West Huron St.

● *Sales and Service Representatives in 12 Industrial Centres* ●

Equipment and Materials



LAMINATING PROCESS WITHOUT HEAT OR ADHESIVES

A new transparent, pressure-sealing type of laminating film and process for its application have been announced by the International Plastic Corp. and is called "Filmonize." The process of applying this film requires neither heat nor added adhesive agents. The film, it is claimed, fuses itself instantly to paper and a variety of materials, merely by the application of slight pressure at ordinary room temperatures. A special machine has been designed for the process. Filmonize laminating film is supplied in rolls up to 20 in. wide and can be applied to roll or sheet stock. Machines are equipped to rewind automatically, or stock can be cut apart at machine immediately after being laminated.

SUBSTITUTION OF PAINT FOR GALVANIZING

Harlan W. Bird, Specifications Branch, Bureau of Industrial Conservation, OPM, recommends substitution of paint for galvanizing wherever possible as a direct contribution to defense. The selection of the proper alternative has been discussed in a bulletin, "Substitution of Paint Coatings for Metallic Zinc Coatings," prepared by E. F. Hickson, chemist, National Bureau of Standards. A limited number of copies are available at the Specifications Branch, Bureau of Industrial Conservation, OPM.

TESTING TRANSPARENT WRAPS FOR GRAPEFRUIT

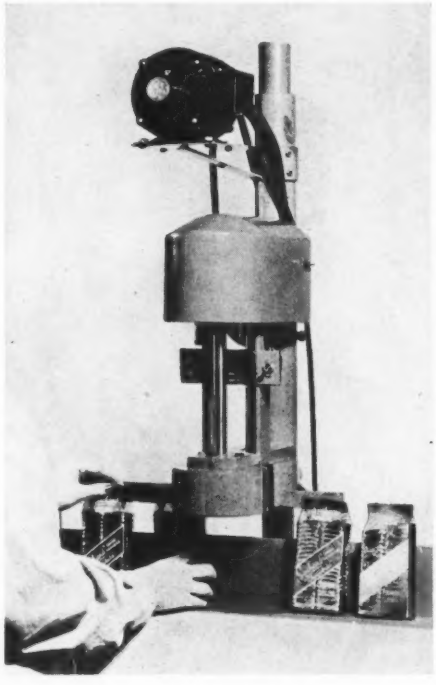
In the horticultural laboratories of the Florida Agricultural Experiment Station, Gainesville, Fla., it was demonstrated recently that grapefruit wrapped in rubber hydrochloride transparent sheeting stored at 70 deg. temperature for 7 months retained its texture and juices, while seeds showed no indication of sprouting. The development of this technique in wrapping oranges and other citrus fruits indicates the possibility of preserving these important products for months at regular refrigerating temperatures. The material used for wrapping was supplied by The Goodyear Tire and Rubber Co.

BREAD END LABELS TO SAVE PAPER

Through the use of end labels on bread wrappers, savings of waxed paper "running into thousands of pounds annually" can be effected according to Albert J. Redway, Jr., president of the National Bread Wrapping Machine Co., in a talk before a recent conservation meeting for the baking industry held in Washington. Mr. Redway estimated that one-half inch in the width of paper could be saved in each loaf. Furthermore, if color on bread wrappers has to be reduced, he believes that end labels, besides conserving paper, will facilitate identification of product and brand.

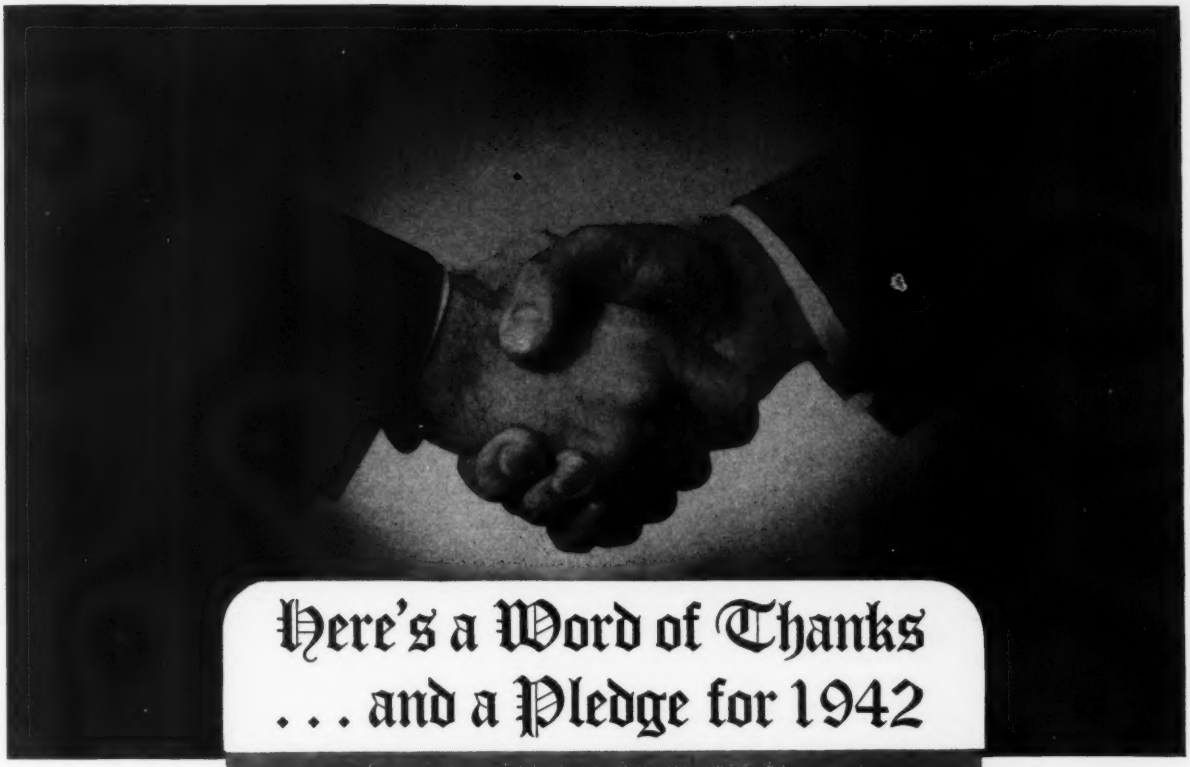
BOND PAPERS FROM RAW COTTON FIBRES

Fine bond and writing papers, usually made from cotton rags, can now be made from such cotton by-products as hull shavings and the waste from ginning, carding and other cotton-cleaning operations, according to an announcement by E. O. Reed of Crane & Co. Efforts to make paper from raw cotton fibres were heretofore impractical, he said, because no way could be found to clean the fibres without using chemicals that would weaken the fibres and thus make them unfit for paper manufacture. Through joint research between The Mathieson Alkali Works, Inc., and Crane & Co., a new commercial chemical, sodium chlorite, has been developed, in which even the most discolored cotton fibres can be boiled, then bleached. The resulting pulp is claimed to be entirely clean and produces paper in every way equal to the best quality from cotton rags.



ROTARY HOT CRIMP SEALER

For single-hand operation or production line work, the "Doughboy" rotary hot crimp sealer is being distributed by the Pack-Rite Machine Corp. The machine is designed for sealing cellophane, rubber hydrochloride sheeting and other heat-sealing bags. Announcements state that the machine will crimp seal two or more thicknesses of heat-sealing material without adjustment. The sealer may be mounted in any desired direction, height or angle. It can be turned on its column to serve more than one sealing station or may be raised and locked out of the way if the work space is needed for other operations. It will seal bags individually or continuously from a production line.



Here's a Word of Thanks . . . and a Pledge for 1942

These are vital times! The resources of industry are being drawn to the task of preserving the American way of life, and in addition, to adequately caring for the normal demands of vibrant business.

Wrights are thankful to their many customers, old and new, who have made possible an outstanding year. We are thankful, too, for the privilege of doing our small bit for the success of the country's gigantic task.

In the important year ahead, we pledge a continuation of this service to our customers . . . and give the assurance that because of advance planning and increased facilities we will be able to do an uninterrupted job for our present customers and to tackle with enjoyment the new problems brought to us by the packaging industry.

STRIP STAMPING MACHINES FOR LIQUOR INDUSTRY

★ ★

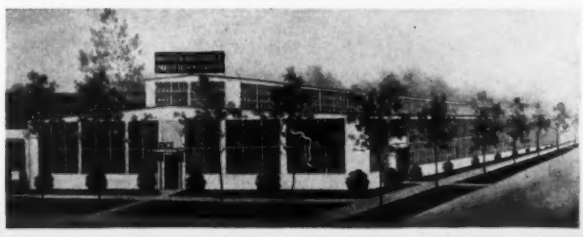
TOBACCO PACKING MACHINES

ALL TYPES OF AUTOMATIC EQUIPMENT

★ ★

HOSIERY PACKERS

ESTABLISHED • 1893 •



PACKAGING ENGINEERS

WRIGHT'S AUTOMATIC TOBACCO PACKING MACHINE CO.

DURHAM CABLE ADDRESS YONWRIGHT NORTH CAROLINA, U. S. A.

Plants and People

At a special meeting, the board of directors of the Packaging Institute elected Joel Y. Lund to serve as president for the unexpired term of George R. Webber of Standard Brands, Inc., who died on November 1, 1941. Mr. Lund is in charge of domestic and foreign production of Lambert Pharmacal Co. He was graduated from the Massachusetts Institute of Technology and his membership in the Packaging Institute goes back to those hot days in Cincinnati when the organization was first formed.

Serving as director of the Institute since that time and on liaison committees with governmental agencies, he has contributed to the solution of problems of packaging technique arising from packaging priorities and legislation. A formula for cartoning collapsible tubes, which enabled users of tubes to meet government requirements without interrupting production or replacing equipment, was developed by Mr. Lund through an Institute committee.

Joel Y. Lund of the Lambert Pharmacal Co.

In taking office, Mr. Lund said, "In the present emergency when nothing must be allowed to interfere with our defense program, the packaging industry is faced with many problems arising from shortages of materials and equipment. The Institute has worked successfully with the government in the past in helping to solve similar problems and will make every effort to do so in the future as occasions arise."

H. W. Prentis, Jr., president of Armstrong Cork Co., announces the resignation of John J. Evans, Sr., as a member of the company's board of directors and the election of Joseph C. Feagley to succeed Mr. Evans. W. D. Martz has been appointed assistant treasurer of the company.

As of January 1, the executive and general sales offices of the Olean Glass Co., Inc., have combined with those of the Thatcher Mfg. Co., with offices in Elmira, N. Y. Walkerman D. Dugan, president of the Olean Glass Co., Inc., will also act as vice-president of the Thatcher Mfg. Co., and Franklin B. Pollock, will serve as vice-president of the Olean Glass Co. The latter company will continue to manufacture a general line of glass containers, operating as a division of Thatcher Mfg. Co.

The Stevens-Nelson Paper Corp. is the new name of the Japan Paper Co., according to an announcement from Herbert Farrier of that company.

American Can Co. has combined the facilities of its General Line Sales Department in Baltimore, Md., and its Packers Can Sales Department, with offices in the First National Bank Bldg.

A testimonial dinner in honor of John L. Dunnock, commemorating his fifty years of service with Swindell Bros., Inc., was held at the Belvedere Hotel, Baltimore, Md. Mr. Dunnock has been associated with the company since 1891.

F. Gladden Searle, vice-president in charge of sales and advertising of the Continental Can Co., Inc., announced the promotion of Clarence W. Smith to assistant local sales manager of the Baltimore Packer's Can sales territory.

Celluloid Corp. has merged with the Celanese Corp. of America, according to an announcement as of December 5 and the merger will now be known as the Celanese Celluloid Corp. The Celanese Corp. has controlled Celluloid Corp. since 1927, although this company existed as a separate corporation until the recent change.

National Can Co.'s new manufacturing plant is rapidly nearing completion. It will be in service at the start of the 1942 season, supplying cans to the trade. Located in the heart of the strategic Chicago area at W. 51st Street and South Austin Ave., this new plant is accessible to the main highways and railroads of the nation's greatest food growing region.

It is another link in National Can's expanding chain of modern manufacturing plants. Dedicated to the many canners who are part of the National family, this new unit will help them to meet the increasing responsibilities of supplying the food requirements of a nation at war.

OBITUARY

Edward G. Gereke, president of Gereke-Allen Carton Co., died December 3, 1941, in St. Louis, Mo.

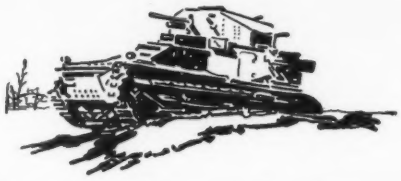
Clarence M. Coate, former president of American Printing Ink Co. and former vice-president and director of General Printing Ink Corp., died December 4 at Sarasota, Florida.

Wilbur Stewart LaRue, vice-president in charge of purchases of The Gardner-Richardson Co., died November 20. Mr. LaRue for many years had been an officer and associate of both The Richardson Co., Lockland, Ohio, and The Gardner-Richardson Co., Middletown, Ohio.

August P. Munning died on October 29, in Matawan, N. J., after several months of illness. Mr. Munning was one of the outstanding figures of the electroplating industry of America and was internationally known for his accomplishments in the industry. Born in Chicago in 1873, he entered the electrical industry at an early age, going with the Leonard Izard Co., which, in 1888, was agent for the original Edison Co.

Dr. Roger N. Wallach, chairman of the board and founder of the Sylvania Industrial Corp., cellophane manufacturers, died at his home in Briarcliff Manor, N. Y., December 14. Dr. Wallach was head of the Grasselli Dye Stuffs Corp. before he founded the Sylvania firm in 1929. He also was treasurer and a director of Associate Owners and president and director of the Filatex Corp.

William Lee Bean, secretary-treasurer of McCormick & Co., Inc., Baltimore, Md., died November 9. Mr Bean had been with the company since he joined the organization in 1892.



Made for "Tough Going" despite their good looks!

FOR PRODUCTS THE BOYS IN CAMP NEED!

shatterproof CELLUPLASTIC CONTAINERS

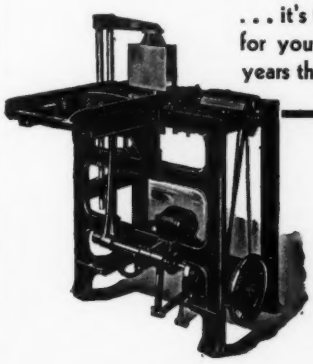
Give the REAL protection of CELLUPLASTIC containers to withstand the usage and activity in camp and field. Embellish with trade-mark or insignia; processed in manufacture. Useful for a thousand items, with re-use advantages, too! Write for details!

FIRST IN CELLUPLASTICS
MYCOLOID - CLEARSITE

CELLUPLASTIC CORPORATION

50 Avenue L Newark, N. J.

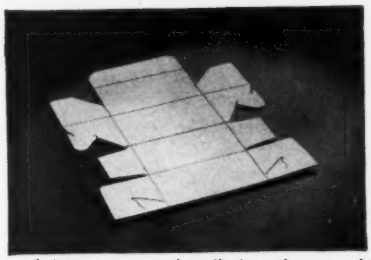
For Greater Production of carton packages . . . at lower cost!



. . . it's these economical machines for your plant in 1942 and many years thereafter.

This PETERS JUNIOR CARTON FORMING AND LINING MACHINE sets up cartons at speeds up to 40 per minute, requiring only one operator. After the cartons are set up, they drop onto conveyor belt where they are carried to be filled. Can be made adjustable to handle different size cartons.

This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE automatically closes up to 40 cartons per minute, requiring no operator. The cartons enter this machine on conveyor belt as open, filled cartons and leave machine completely closed. Can also be made adjustable to handle different size cartons.



Type of die-cut cartons handled on these machines

Send us a sample of each size carton you are interested in handling and we will be pleased to recommend machines to meet your specific requirements.

PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

For Your Information

"Help Make America Strong" is the title of a new booklet compiled by the American Can Co. In a foreword, the company explains that the booklet was compiled in answer to a real need for stressing good food habits in the family, particularly in this time of national emergency. It contains a balanced diet recommended by the government, charts giving food essentials and a section on the home cooking of canned foods and the place of canned foods in the normal balanced diet.

Carbide & Carbon Chemicals Corp. looks ahead in issuing its booklet, "Vinylite Plastic Sheet and Sheeting," even though military service now has first call for thermoplastic resins. The book discusses and illustrates composition, processes of manufacture and forms in which the material is available. Pictorials in color, as well as in black and white, illustrate a wide variety of applications.

Wine packagers will find interesting the description of early champagne packaging discussed in the second edition of "Short History of Pioneer Champagne Producers of America," recently published by The M. Hommel Wine Co., Sandusky, Ohio. The booklet deals with the difficulty of producing the first bottles for wines, of finding suitable closures and how the early champagne makers had to be basket makers as well as vintners in order to make suitable containers for shipping the wine.

The tenth anniversary of the development of synthetic rubber was recently announced in a mailing sent out by the Rubber Chemicals Division of E. I. du Pont de Nemours & Co. The bulletin stated that this company is making synthetic rubber material today at the rate of over a million pounds a month and that additional plants are under construction which will increase production to three and a half million pounds a month by the fall of 1942.

"How to Prepare and Use Glues, Pastes and Gums" is the title given by National Adhesives, division of National Starch Products, Inc., to its "handbook for every user of adhesives." The booklet is offered as a guide to users of adhesives and to assist them in obtaining greater efficiency through the proper handling and use of these products. It contains information on storage and care of glue, how to preserve it after the package has been opened, the importance of clean equipment, how to thin prepared glues and paste, various types of glues and how they are used.

The story of cellophane is dramatically illustrated in one of the stylized sets of the new reception room opened by E. I. du Pont de Nemours & Co. late in November for its rayon and cellophane division in the Empire State Building, New York. The story is told by a third dimensional display and begins with a miniature spruce tree. Then the display symbolizes the viscose process and leads on to sponges, cellulose seals and the casting of viscose into such forms of cellulose as are used for manufactured articles, package wrapping and industrial applications.

"How to Stack and Load," just published by The Hinde & Dauch Paper Co., is designed to help manufacturers in all fields plug cost-leaks in departments concerned with the traffic of corrugated shipping boxes. Specifically the booklet deals with the opportunities for conservation of time and space by increasing the efficiency of stacking and loading operations. These opportunities are reduced to eight rules, which form the factual basis for the discussion. The booklet is No. 2 in the company's "Little Packaging Library." Copies are free on request to the company's main office.

In an effort to keep its customers' presses rolling during this period of material shortages, the Eagle Printing Ink Co., division of General Printing Ink Corp., has released a number of helpful suggestions for the conservation of printing inks. The release states: 1. That oftentimes savings in scarce materials can be made if the printer will cooperate with the manufacturer by giving complete information concerning the properties of the ink desired. 2. That a considerable amount of ink can often be saved in the press room by covering all partially used cans or kits when not in use to minimize the amount of skin. If the ink is carefully leveled in the can and an oil paper placed in intimate contact with the whole surface there is little chance of skin forming. 3. That the printer can help in the saving of tin cans by ordering as large containers as possible. 4. That the mileage, or number of impressions per pound of ink, depends upon the nature of the pigments used. Opaque inks naturally provide less coverage than those of transparent color. The pressman can, however, increase mileage by careful make-ready, proper setting of the rollers and an even setting of the fountain.

Dennison Mfg. Co. has issued a useful booklet called "Paper Products for Defense Contracts," which gives brief description and illustrations of various types of paper tags, labels and other paper items which help to identify merchandise made for defense purposes. Also published by Dennison recently is this company's Winter 1941–1942 booklet called "Display Ideas." The booklet contains many ways to use the company's products in displays for all the winter holidays, including Valentine's Day, Washington's and Lincoln's birthdays.

Higgins Ink Co., Inc., issues its new catalog. One of its outstanding features is a color wheel on the inside front cover which is made from actual swatches of Higgins drawing inks applied on white drawing paper. In a paragraph below this color chart is the explanation of a code which enables the dealer to order by number the desired colors and sizes. All listings throughout the catalog show product numbers. The catalog is printed in red and black and the cover is varnished for durability.

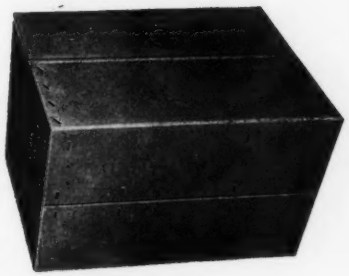
Packaging, a booklet on the proceedings of the Printing and Advertising Clinic, held recently in New York City, has just been issued. The clinics are sponsored by General Printing Ink Corp. The booklet contains the speeches of Charles A. Southwick, Jr., of General Foods, on "Package Structure and Materials"; William H. Walters, of the U. S. Printing and Lithograph Co., on "Reproduction Problems of Packaging Material"; H. F. Brownell, of McKesson and Robbins, on "Management, Money, Merchandising, Men, Material and Machinery"; and John H. Breiel, of N. W. Ayer & Son, on "How Can We Use This Package in Our Merchandising Program." Christopher W. Browne, editor, Modern Packaging, was program chairman.

"Latin America As a Source of Strategic Materials and Other Essentials" is the subject of the 397-page Report No. 144, Second Series, issued by the United States Tariff Commission and is available for 50 cents on request to the Superintendent of Documents, Government Printing Office, Washington, D. C.

National Canners' Assn. and other allied organizations, constituting one of the largest business gatherings in the country, will meet in Chicago during the entire week beginning January 26. The entire conference will deal with the importance of food and nutrition in a war-time economy and with efficient means of packing and distributing foods for military and civilian use.

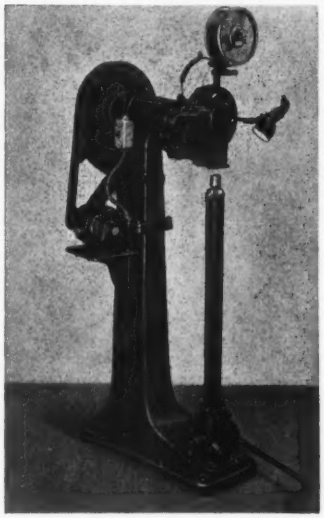
WIRE STITCHED CONTAINERS ARE BETTER

Note the wire stitches in bottom of this box.
Note the wire stitches in the manufacturer's seam.



These wire stitches make the box stronger because wire stitching utilizes the full strength of the board. Wire stitching is also more rigid than taping, more convenient than gluing. Stitching is uniform—one box just like the next.

You can wire stitch the bottoms of 10 boxes now and 10 more an hour from now with no loss of time—the stitcher is always ready just by clicking the switch—no preparing of glue or weighting the boxes or waiting for glue to set. When you are stitching continuously, you can stitch the bottoms of many more boxes per hour than you can tape or glue.



Wire Stitching gives you security, rigidity and economy.

THE IMPROVED LATHAM BOTTOM STITCHER

is a moderately priced, sturdy, high speed stitcher for stitching the bottoms of the regular run of thicknesses and sizes of corrugated and solid fibre boxes. Thoroughly practical, dependable, and widely used in a great variety of industries.

Some of its virtues are: . . . Ample clearance between stitcher head and post . . . Single pedal control of stitching post and stitcher head . . . Positive control of wire, assuring uniform stitches . . . Formers and drivers reversible, increasing their length of service . . . Reliable clutch . . . Head removable as a unit . . . Adjustable working light . . . Durable V belt drive . . . Easy to operate, modern construction, materials used are best for the purpose. Based on 55 years of stitcher building.

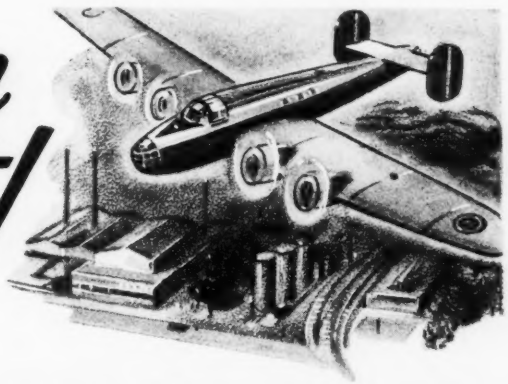
DEXTER FOLDER COMPANY

330 West 42nd St., New York, N. Y.

BOSTON 185 Summer St. | PHILADELPHIA 5th and Chestnut Sts. | CHICAGO 117 W. Harrison St. | CINCINNATI 3441 St. Johns Place

DALLAS—J. F. Carter, 5241 Bonita Ave.

Objective in Sight!



CAPEM Screw Capping Equipment is built in 1, 3 and 4 spindle models. The 4-spindle machine has an adjustable head which may be raised and lowered to accommodate different size containers. It also is equipped with helicoid worm feed to facilitate the handling of liquid-filled containers at high speeds.

For the past several months our responsibilities toward National Defense have made it difficult for us to supply the needs of our regular customers promptly. Naturally, defense needs *must* come first. But we appreciate the patriotic spirit shown by our non-defense customers, who have been most patient even though in some instances delay in receiving machines on order seriously handicapped their production.

During this time, however, we have been enlarging our plant facilities and making every effort to so arrange our schedules that we can fill our defense orders and at least a part of those from our regular customers with reasonable promptness. This objective is now in sight. While we may not be able to fill orders quite as fast as in peace times, we are confident that you will note a marked improvement in our deliveries in the very near future.

Meanwhile, we are maintaining service as usual, of course, on all Consolidated equipment already in operation.

CONSOLIDATED PACKAGING MACHINERY CORP.

1400 WEST AVENUE BUFFALO NEW YORK

Round two coming up

(Continued from page 38) and bleached northern kraft, bleached sulphide for bond and book papers, soda pulp and groundwood.

Tin Order M-43

OPM'S Order M-43, issued December 18, provides that: 1. All supplies of tin shall be subject to specific allocation and the purposes for which tin is used shall also be specified. 2. No tin may be sold or delivered without specific permission of the Director of Priorities. 3. Future imports of tin may not be sold except to the Metals Reserve Co. or other governmental agency. 4. Tin now afloat may not be sold except by special permission of the Director of Priorities.

The only exception to the order is that a distributor may deliver to his regular customers less than 5-ton lots of tin, subject to Priorities Regulation No. 1. Inventory provision of Regulation No. 1 will be invoked and no deliveries of tin or tin products will be made to fabricators who have ample stocks on hand. A conservation order, limiting the uses of tin and the use of tin-lined cans, may be issued shortly. According to tin experts in OPM, de-tinning is an expensive process, but salvage operations in that field may be necessary.

Order L-25 on foil, suspended until December 24, is being further held because new conditions require more drastic restrictions. New order will replace L-25 and cover both tin and foil.

Conservation bureau shapes up

Dr. E. W. Ely of the Bureau of Standards has been loaned to OPM's Bureau of Industrial Conservation under Lessing J. Rosenwald. General program, in which all business can cooperate, was summarized for Modern Packaging by Dr. Ely:

"Simplification is THE most important thing for all industries to accomplish first, in these serious days. It is the initial step for every industrial manager to take in conserving our scarce materials and is rapidly becoming recognized as a prerequisite in questions involving priorities and allocations.

"If all industries will act, now, simultaneously, in the matter of eliminating the unnecessary sizes, varieties, types, etc., of the articles they produce and will concentrate their purchases of the items that they themselves consume, the total contribution to the requirements of our military establishments will be astonishing. Here is an opportunity for business and commerce to surrender quantities of those materials which actually they do not need, and will not miss, and which can be transformed into tanks, guns, planes and ships.

"Wrapping and packing supplies, containers of all sorts (glass, wood, metal, textiles, paper, etc.) have already been passed through the selection process known as simplification, but much more remains to be done in this area of physical distribution of the thousands of different kinds of commodities that roll off the ends of assembly lines.

"In 'secondary' containers, meaning those in which a quantity of primary containers are packed, the field is virtually untouched. Individual firms have adopted their own simplified list of standard containers for carrying thousands of products. There is needed a general effort, however, to simplify similar containers used by different industries. Many products require a third container for shipment, carrying a certain number of secondary containers. The same situation as regards unnecessary variety applies with equal force to shipping containers and, in addition to the usual advantages of simplification, a further advantage can be gained through reduction in variety of packing and stowing methods for shipment in freight cars, trucks and other transportation equipment. Simplification of both kinds of containers would not only reduce their cost, but would result in substantial savings in cost of handling, storing, loading and unloading.

"Container simplification is closely related to simplification of machines, and leads directly to the conservation of not only the material entering into the making of the container itself, but also of metals for the machines. Opportunities for such simplification cover almost every kind of machine or device used for such purposes.

"It has been customary to use burlap as a wrapping in some types of packaging. This custom will have to be abandoned for the duration of the war. Burlap is brought from British East India in ships whose bottoms must now be employed to bring us other materials more vital to us than burlap.

"Every reader of Modern Packaging should feel free to submit suggestions to the Simplification Branch in regard to observed opportunities for simplification of products and conservation of the materials used in their manufacture."

Rule 41—Solid or corrugated fibre containers

Recent practical conservation measure was modification of Consolidated Freight Classification Rule 41 on solid or corrugated fibre containers, to apply until November 15, 1942, with possible extension or cancellation prior to that date. Many sections of the rule have been relaxed to reduce consumption of fibre board. For instance, a shipping container to accommodate 40 lbs. gross weight may now use liners or facings of .028 in. thickness (for double liners) as compared with .032 required under the old rule. Another new feature is inclusion of specific methods for making the Cady or Mullen tests to determine bursting strength.

Dolls prove power of minature

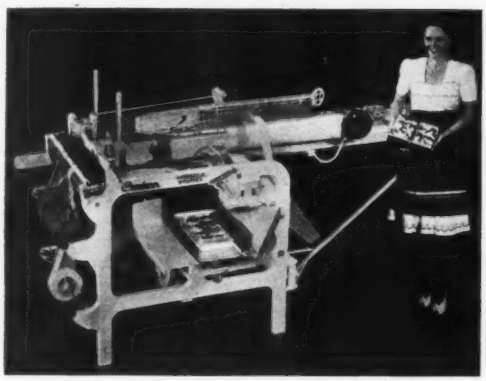
(Continued from page 76) duplicate costumes were used in the outside windows, while attractive twin girls, similarly attired, displayed the hosiery and the twin packages, giving a selling talk that did much to attract customers to the department and to clinch sales. The twin theme was further emphasized in all newspaper advertising, mail advertising and display cards. Measured in increased sales, the promotion was highly successful and the twin mannequins again proved their value to us in dramatizing hosiery.

Our new trade mark design is a miniature mannequin, an original Jan Norriss figure. She is "Miss Roman Stripe" to a selected group of stores who have welcomed her in their hosiery departments, but she's known (in affection, not disrespect) as "Dizzie Lizzie" to us. This tiny figure (only 12 inches high) is a real hosiery model. Seated on a boudoir cushion, covered with striped silk, she wears over her pink slip a tailored black satin robe with striped revers. One shapely leg is gracefully outstretched as though she were pulling on an invisible stocking. Miss Roman Stripe is a permanent display in hosiery departments, so she doesn't get to travel about as much as some of her sister mannequins, but as her patrician profile and glamorous silhouette are to be found on most of our advertising material, she gets around.

It's difficult even to hazard a guess on the possible effects of the present hosiery situation on future hosiery display. If the new hosiery looks less lovely than sheer silks, it will need a more dramatic presentation than ever before.

SIMPLE, ECONOMICAL

automatic wrapping



The VARIETY wrapper

•

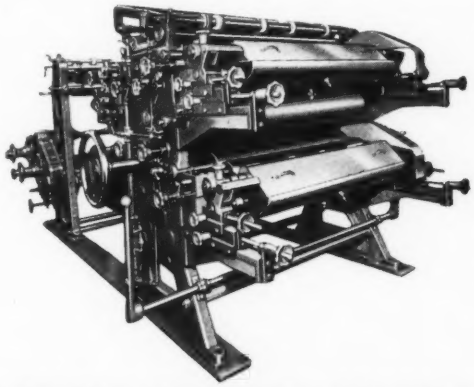
$995 FOB Rock Island, Ill.

One girl turns out 1000 neat packages per hour, wrapping a wide range of different sized packages on the one machine. Let us wrap samples of your products for your inspection.

GELLMAN MANUFACTURING CO.

EASTERN OFFICE AND DISPLAY
1270 Sixth Ave., New York

HOME OFFICE AND FACTORY
Rock Island, Ill.



ANILINE PRINTING PRESSES

A specially designed unit for each and every purpose to which this new and popular process has been applied. One to four colors. Any widths. Units may be used with aniline inks, water soluble inks or soft oil inks.

Specially designed sheeter for use with our presses with speed up to 300 lineal feet of sheeted stock per minute.

HUDSON-SHARP

MACHINE CO • GREEN BAY • WIS

LUSTEROID

Lusteroid packages are made of a rigid cellulosic material that has great strength.

FLEXURAL STRENGTH:
IMPACT STRENGTH:
TENSILE STRENGTH:

} All these qualities are present in high degree in Lusteroid containers

This material is also exceedingly light in weight, with a low specific gravity.

The combination of light weight and great strength means lower shipping costs and great product protection with minimum breakage and no wadding or filling. Investigate these unique Lusteroid packages without delay. They answer many of your packaging problems.

LUSTEROID CONTAINER CO.

INCORPORATED

Formerly Lusteroid Division of the Sillcocks-Miller Company

10 Parker Avenue, West — South Orange, N. J.

DEALERS HAVEN'T TIME TO SELL YOUR PRODUCT!

Don't expect dealers to push your product — they simply haven't time, and they're not particularly interested. Provide a counter or floor display and give your goods a chance to sell themselves. Crystal Displays do get preferred floor and counter space.

Let us work with you. Our big, illustrated, 56 page book, "DISPLAY IDEAS" is FREE. Write for it today, — on your letterhead, please.

CRYSTAL MANUFACTURING COMPANY
1725 DIVERSEY BLVD., CHICAGO
REPRESENTATIVES IN PRINCIPAL CITIES

CLASSIFIED

WANTED: Acetate sheet scrap and trimmings. Submit samples and details of quantities, grades and colors. Reply Box 148, Modern Packaging.

MACHINERY WANTED: Modern machine for producing mailing-tubes, which will make tubes larger than 3" in diam. Communicate with The Dyment Co., 1163 East 40th St., Cleveland, Ohio.

This Space Will Henceforth Be Devoted to Classified Advertisements.

Classified advertisements may be inserted at the nominal rate. $5.00 per inch. Minimum space—1 inch. About six words per line, 10 lines per inch.

ADVERTISEMENTS Will Be Restricted to Those of a Helpful Nature.

Positions Wanted, Help Wanted, Lines Wanted are typical categories.

Address: **Classified Advertisements**
MODERN PACKAGING MAGAZINE
122 East 42nd Street - New York City

London editor looks to the future

(Continued from page 58) Among other packaging developments are these three: (1) the introduction of three new standards by the British Standard Institution for the rot-proofing and protection of canvas, yard, cordage, jute, hessian and other types of packing; (2) the provision of greatly improved styles of steel tensional strapping, particularly for use with valuable articles which have to be packed in weaker packing material (i.e., inferior board of wood or paper); (3) a new process for giving a lasting protective lining and coating to metal packing cases and tanks—a coating which, besides being corrosion-resisting, will not impart taste or odour to substances with which it comes into contact.

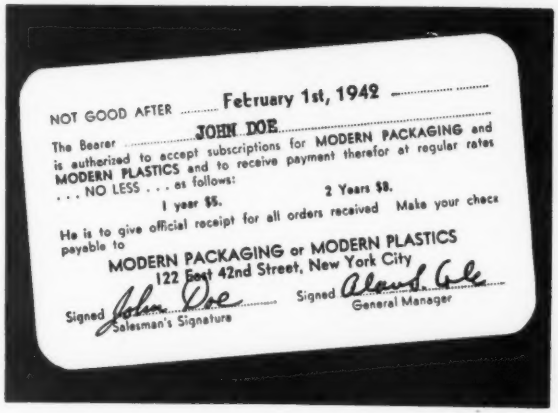
Owing to the scarcity of raw materials available, the Assn. of Manufacturers of Vegetable Adhesives recently made application for additional ration of adhesive materials. This they were granted and a proposed permit scheme for the purchase of adhesives has been dropped. This example of the added importance of trade associations in wartime reminds me that recently a number of new organisations have been formed. One is the Closures Manufacturers Assn. of Great Britain, which includes all makers of closures for bottles or other containers—metal caps, cork stoppers and the like, but not crown corks, moulded closures and ordinary corks which are already catered for by other organisations. Another is National Box and Packing Case Manufacturers' Federation, which combines about five or six regional organisations. Yet a third is the Food Substitute Manufacturers Assn., which will represent what is almost entirely a wartime-created trade, that of supplying substitute products for rationed or unobtainable foods. Incidentally, progress in the substitute field continues. Almost every week there are new lines, such as Limex, a lime substitute powder; Oranjesast, a tonic yeast drink marketed as a substitute for oranges; and Chieftain egg substitute powder. Sales of all these types of products are surprisingly large and they are displayed not only at food shops, but at sweet shops, tobacconists, drapers, chemists.

In the field of new packaging designs, I have practically nothing to report. Many products are going off the market. Those that remain are marketed as best as they can be, using inferior qualities of their original packaging materials or, as in many of the cases I have outlined in previous articles, appearing in cheap board containers. An example of what I mean is now supplied by J. Lyons and Co., Ltd., which is now marketing its custard powder in a fibre can instead of tin. As an attempt to conceal the pack's initial drabness, a varnished label covering the whole surface was used, but later restrictions necessitated reducing this to a band, revealing an area of nude chipboard. Even so, a smooth label surface and a modern design retain the atmosphere of cleanliness.

Two fields of publicity that are booming are display and the films. Display is the backbone of many of the government advertising campaigns now launched, as in the case of the new Warship Weeks Drive, which has the largest display campaign the government has ever sponsored. Displays appear in no less than 15,000 shops. In the film industry, the British Council has launched a huge series of trade publicity films, covering some 25 major industries. These are sponsored by the Board in conjunction with export groups and will be shown mostly abroad.

SUBSCRIPTION WARNING

Pay your subscription agent only if he has our *Authorization Card* dated *February 1, 1942.*


NOT GOOD AFTER February 1st, 1942
The Bearer JOHN DOE
is autherized to accept subscriptions for MODERN PACKAGING and MODERN PLASTICS and to receive payment therefor at regular rates . . . NO LESS . . . as follows:
1 year $5. 2 Years $8.
He is to give official receipt for all orders received Make your check payable to
MODERN PACKAGING or MODERN PLASTICS
122 East 42nd Street, New York City
Signed John Doe Salesman's Signature
Signed Alan S. Cole General Manager

Make checks payable to

MODERN PACKAGING

Chanin Building, 122 E. 42nd St., New York, N. Y.

UNION means STICKING TOGETHER

Whether it's the walls of a set-up box or a label and a bottle or an automatically applied transparent cellulose window in a carton—once they're stuck together they must stay that way until deliberately destroyed by the consumer. Our company has devoted nearly 75 years to making better adhesives for every purpose.

In the course of our researches—in which we've uncovered about 700 formulas, all at your service—we've invented adhesives for holding transparent cellulose sheets together, for gluing lacquered or varnished surfaces and many others. We'll gladly do the same for you, if need be, or prepare one of the existing 700 to meet your need.

Established 1866

Union Paste Company

1605 HYDE PARK AVENUE • HYDE PARK, MASS.

HOTEL CHELSEA

RIGHT ON THE BOARDWALK

ENJOYABLE THE YEAR 'ROUND

Take time out for a visit to The Chelsea, Atlantic City's distinctive beachfront hotel. You'll find diversion, good-living, and good company—outside ocean-view rooms, sundecks, a beautiful dining room at the water's edge, superb French cuisine, sports, entertainment, game room, magnificent Bar.

ILLUSTRATED FOLDER ON REQUEST

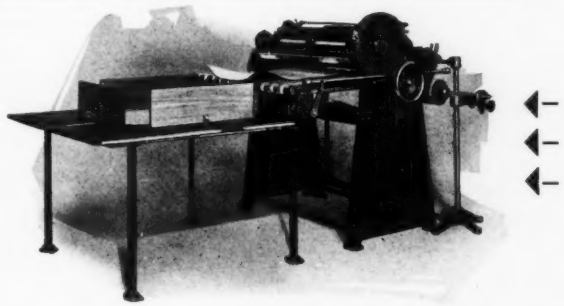
DAILY RATES FROM
$6.50 ROOM, BATH, MEALS
$3.50 ROOM ONLY & BATH
Per Person—2 in a room

ATLANTIC CITY

JOEL HILLMAN • J. CHRISTIAN MYERS • JULIAN A. HILLMAN

Let the War Reduce Your Force to a Skeleton

SO WHAT?



The Beck Sheeter

will release hands for other work, because thru its great simplicity, it needs very little of the operators' attention, once it is set. Especially when equipped with **ELECTRIC EYE CONTROL** are you freed from human element in your sheeting work. Amazing degrees of accuracy in "spot sheeting" work, plus profitably increased outputs. The need for doing your own sheeting is probably more acute now than ever before in your business history, and this because of present conditions.

CHARLES BECK MACHINE CO.

13th & Callowhill Streets Philadelphia, Pa.

INDEX OF ADVERTISERS

Aluminum Co. of America 14
American Can Co. ..... Inside Front Cover
Anchor Hocking Glass Corp. 63
Arabol Manufacturing Co. 59

Chas. Beck Machine Co. 103
Bostitch, Inc. 77
F. N. Burt Co., Inc. 49

Carr-Lowrey Glass Co. 5
Celanese Celluloid Corp. 20
Celluplastic Corp. 97
Chelsea Hotel 103
Classified 102
Consolidated Fruit Jar Co. 105
Consolidated Packaging Machinery Corp. 99
Continental Can Co. 9
Crown Can Co. 57
Crown Cork & Seal Co. 61
Crystal Manufacturing Co. 102

Dexter Folder Co. 99
Dow Chemical Co. 16
E. I. du Pont de Nemours & Co., Inc., Cel-O-Seal Section 19
Durez Plastics & Chemicals, Inc. ..... Inside Back Cover

Eagle Printing Ink Co. 105
Einson-Freeman Co., Inc. 66
Samuel Eppy, Inc. 105

J. L. Ferguson Co. 85
Fitchburg Paper Co. 8

Gellman Manufacturing Co. 101
Goodyear Tire & Rubber Co., Pliofilm Sales 11

Hampden Glazed Paper & Card Co. ..... Insert 4–5
Harris-Seybold-Potter Co. 89
Heekin Can Co. 65
Hinde & Dauch Paper Co. 15
Hudson-Sharp Machine Co. 101
Humitube Manufacturing Co. 105

Kimble Glass Co. 10

Lowe Paper Co. 68
Lusteroid Container Co., Inc. 101

Monsanto Chemical Co., Plastics Div. 106

Nashua Gummed & Coated Paper Co. 26
National Adhesives Div. of Nat'l Starch Products, Inc. 50–51
National Can Corp. 12–13
New Jersey Machine Corp. 93

Owens-Illinois Glass Co. 6–7

Package Machinery Co. 78
Packaging Catalog 18
Peters Machinery Co. 97
Phoenix Metal Cap Co. 1
Pilliod Cabinet Co. 53
Plastics Catalog 4
Pneumatic Scale Corp., Ltd. 87

F. B. Redington Co. 3
Rhinelander Paper Co. 55
Riegel Paper Corp. 25
W. C. Ritchie & Co. 17

Shellmar Products Co. ..... Back Cover
Stokes & Smith Co. 91
Swindell Bros. 21
Sylvania Industrial Corp. 22–23

Union Paste Co. 103

Wright's Auto. Tobacco Packing Machine Co. 95

MODERN PACKAGING

BRESKIN PUBLISHING CORPORATION—Chanin Building—122 E. 42nd St., New York, N. Y.

SPECIALISTS
in the manufacture of
CAN & BOTTLE CLOSURES

LET us quote you on your requirements. Hundreds of dies and molds available for Essential Oil Cans, Sprinkler Tops, Screw Caps, Aluminum Capped Corks, Lead and Tin Coated Spouts, Metal Specialties. 80 years' experience in meeting the needs of packagers. Call upon us for aid.

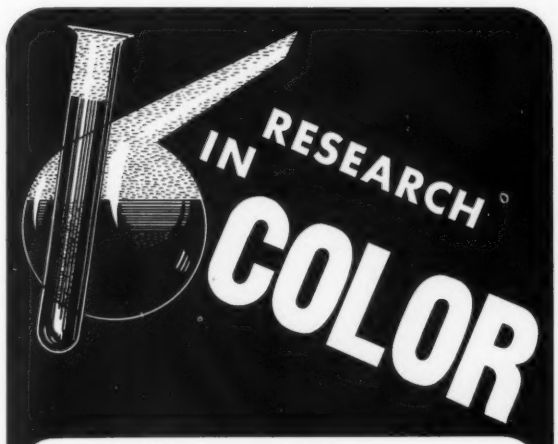
CONSOLIDATED FRUIT JAR COMPANY
NEW BRUNSWICK • NEW JERSEY

HUMITUBE MFG. CO.
PEORIA, ILLINOIS

A pioneer converter of Flat, Square and Satchel Bottom bags, plain and printed.

Envelopes, pouches, cigar tubes and transparent drinking straws made of—

Cellophane
TRADE MARK
THE DUPONT CELLULOSE FILM



There are all sorts of angles on color that bear looking into. The pertinent facts we have accumulated on this subject are yours for the asking. Write to Color Research Laboratory, address below.

EAGLE PRINTING INK CO.
DIVISION OF GENERAL PRINTING INK CORPORATION
100 SIXTH AVENUE, NEW YORK
PHILADELPHIA · CHICAGO · CINCINNATI · CAMBRIDGE · BALTIMORE · JERSEY CITY

READY-TO-USE
Charms
For Your Package

These appealing *charms* are proved sales getters — there is no question about their effectiveness in dozens of applications.

They come prepared in two convenient ways for ready use:

1. On barbed string for inserting into card or package.
2. On plain string for neck of bottle, use as zip opener, etc.

All colors, silver or gold plated if you wish, these charms are a terrific impetus for consumer buying.

We offer you the most machinery-organized production facilities available for doing all or any part of the job of attaching CHARMS to STRINGS. Prices low

Send for special test batch—let charms prove themselves to you.

SAMUEL EPPY, INC.
CHARMS—Made in U.S.A.
333 Hudson St. • New York City

Saving for Defense made easy

— by these clever banks of VUEPAK!

QUARTERS in the middle slot . . . dimes in the two outside slots . . . and watch your spare change grow into a $25 U. S. Defense Bond!

It's thrifty and it's patriotic to save for defense. Now, it's also fun, thanks to these neat little banks of rigid, transparent Vuepak, designed and fabricated by the United States Envelope Company.

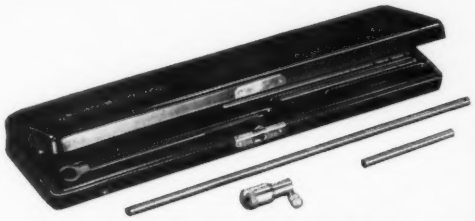
Top and bottom are metal, a cheerful red. Walls are formed from one sheet of clear, sturdy Vuepak, printed in brightly contrasting white and blue. Inside are three tubes, also of Vuepak, to hold the coins in stacks, flat and even so you can see in a glance exactly how close you're getting to your goal.

A great idea—these banks! And a great idea-stimulator—Vuepak!

Clear and transparent, yet sturdy and rigid, this modern packaging and display material has helped scores of manufacturers find new and effective solutions to many vexing sales and packaging problems. MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Mass.

VUEPAK
TRANSPARENT PACKAGING MATERIAL
TRADE MARK

MONSANTO
PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

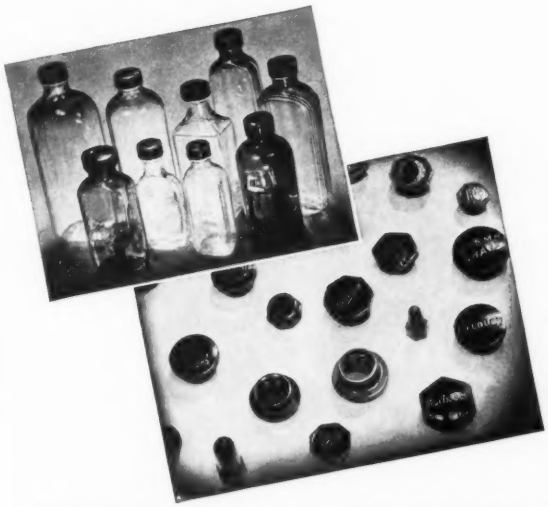


INDUSTRIAL PACKAGING. As proven by this box for a micrometer set . . . Durez can bring many hidden assets to a package . . . such as high impact strength, dielectric strength, durability, moisture, heat, acid and oil resistance!

DUREZ Plastics for tomorrow!

COMPLICATED MOLDINGS. Durez plastics have an enviable record for making possible package designs that require complicated, precision molding. As you see here, this vial cap is not removed. A slight twist brings two openings in line so that tablets may be tapped out.

DISPLAYS. Functional excellence becomes an integral part of your package when you mold with Durez. For example, this display is more than an "eye-catcher," it serves as a compact counter size flashlight department!



CLOSURES. One or a million . . . molded Durez caps and closures are uniformly perfect. One-piece molding assures mass production economies . . . and plastics' smart sheen lends new sales appeal to thousands of products.

THE FUTURE will see Durez playing the same important part in packaging that it has in the past —ever since it introduced plastics to closure manufacturers years ago.

Today Durez production is being absorbed by Defense priorities—even the additional production which only recently was put into action.

Because we believe in a greater tomorrow, because the qualifications of versatile Durez plastics have met packaging problems so well before, because we are preparing Durez plastics to meet such problems even more efficiently . . . our engineering staff is at your service *now*.

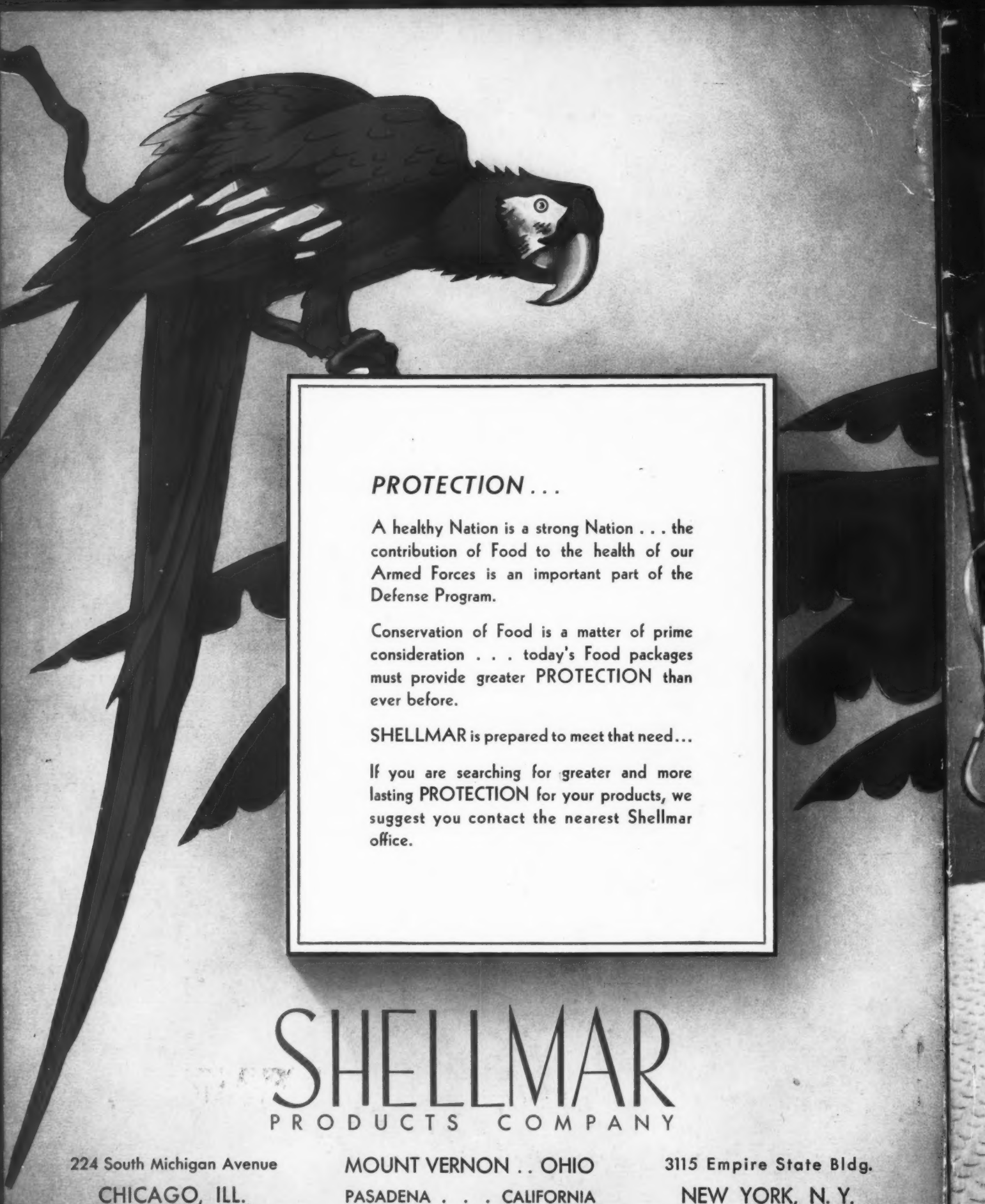
In your plans for tomorrow, consider Durez. Sales manager, designer, engineer—everyone who has a hand in guiding a new product to the consumer can find logical reasons for considering and adopting Durez. Here are a few of the hundreds of Durez users—proof of the job Durez has done . . . and will do again.

DUREZ PLASTICS & CHEMICALS, INC.
1201 WALCK ROAD, NO. TONAWANDA, N. Y.

Abbott Laboratories
American Chicle Co.
American Safety Razor Corp.
Elizabeth Arden
Armstrong Cork Co.
Harriet Hubbard Ayer, Inc.
Barbasol Co.
Bausch & Lomb Optical Co.
Blackhawk Mfg. Co.
Bourjois, Inc.
Bristol-Myers Co.
Campana Sales Co.
Carter Ink Co.
Clark Bros. Chewing Gum Co.
Clark Millner Co.
Colgate-Palmolive-Peet Co.
Coty, Inc.
William C. DeMuth & Co.
DeVilbiss Co.
Elgin National Watch Co.
F. W. Fitch Co.
Gillette Safety Razor Co.
Gorham Co.
Barbara Gould
Hickok Mfg. Co., Inc.
International Tool Co.
Knapp Monarch Co.
Lambert Pharmacal Co.
Larsen Baking Co.
Lehn & Fink Products Corp.
Longines Wittnauer Watch Co., Inc.
MacGregor Instrument Co.
Mallinckrodt Chemical Works
Merck & Co.
National Distillers Products Corp.
Northam Warren Corp.
Norwich Pharmacal Co.
Owens-Illinois Glass Co.
Parke-Davis & Co.
Parker Pen Co.
Pioneer Suspender Co.
Ray-O-Vac Co.
Schenley Bros. Corp.
E. R. Squibb & Sons
Stanley Electric Tool Division
Towle Mfg. Co.
Ward Baking Co.
J. B. Williams & Co.
Zonite Products Corp.

DUREZ PLASTICS & CHEMICALS, INC.

PLASTICS THAT FIT THE JOB



PROTECTION . . .

A healthy Nation is a strong Nation . . . the contribution of Food to the health of our Armed Forces is an important part of the Defense Program.

Conservation of Food is a matter of prime consideration . . . today's Food packages must provide greater PROTECTION than ever before.

SHELLMAR is prepared to meet that need...

If you are searching for greater and more lasting PROTECTION for your products, we suggest you contact the nearest Shellmar office.

SHELLMAR
PRODUCTS COMPANY

224 South Michigan Avenue
CHICAGO, ILL.

MOUNT VERNON . . OHIO
PASADENA . . . CALIFORNIA

3115 Empire State Bldg.
NEW YORK, N. Y.